

## Lepidoptera of Pakistan based upon the Info-system of the Cesa

### I Geometridae

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**Abstract:** Lepidoptera of Pakistan based upon the Info-system of the Cesa I-Geometridae. *Cesa News* 77: 1-76, 22 figs.

This article deals with the Lepidoptera of Pakistan. It is based on the literary data, as well as the information of the Cesa collection based upon the expedition realized in 1987. In the part of Introduction, general faunistical and zoogeographical evaluations are made. Various lists of the genera of 51 families are given. 802 publications are listed and classified according to various bibliographical subjects. In the first part, 178 species of the family Geometridae are listed faunistically together with their synonyms, and distributional codes. Totally 8 genera, and 15 species are new records to the fauna of Pakistan. Among them 22 species are illustrated.

**Key words:** *Lepidoptera*, *Geometridae*, fauna, Pakistan, bibliography.

### Introduction

Most of the territories of Pakistan, especially the places under the influence of the hot and humid climate are usually included in the Oriental Region. On the other hand, the northern area of the state, including Kashmir have the representatives of both regions, i.e., Palaearctic West-Central Asia, and Oriental Region. Therefore, the Lepidoptera fauna of Pakistan can be estimated by more than 6-7000 species. However, the present number of the known species, mentioned here, is very low. Although the present fauna have been better studied by the British lepidopterists during the late 19th century. It is an unfortunate that especially the moth fauna has been superficially studied in the 20th century.

The present part deals with the general evaluations of the lepidopterological bibliography, general aspects to the genera of the Lepidoptera fauna in 51 families, list of the family *Geometridae* together with the information on synonymies, codes<sup>1</sup> of the range of the species, as well as examined specimens, collected by the first author during his expedition to northern Pakistan in 1987.<sup>2</sup> The materials are preserved in the collection of the Cesa. Some of the specimens were photographed by the second author. Identification of the specimens were made by the authors. Most of the collected and identified material are listed here for the first time. The non-identified specimens at the specific level will be separately evaluated.

Concerning the lepidopterological fauna of Pakistan, 1307 species, belonging to 51 families, are currently recorded in Cesa info-system.<sup>3</sup> The butterflies are represented by 325 species, while the moths by 982 species. This information, accompanying with the evaluations of the collected material are given in this serial in parts. In the first part, the family *Geometridae* comprises 178 species mostly based upon the published data. For this purpose, nearly 800 publications related direct or indirectly within this program are evaluated.

## Annotated Lepidopterological Bibliography of Pakistan

Totally 802 items related with the *Lepidoptera* of Pakistan have been evaluated according to their contents. Selected 28 scientific subjects and their abbreviations used in the bibliographical database of the Cesa are given below alphabetically:

**ATL** – Atlas or figure(s) (318 items), **BIB**- Bibliographical content (372 items), **BIO**- Bionomy (109 items), **CAT**- Catalog, checklist (102 items), **CLA**- Classification (98 items), **CON**- Conservation (no item), **DIS**- Distribution (195 items), **ECO**- Ecology (109 items), **EGG**- egg morphology (8 items), **ETH**- Ethology, behaviour (no item), **EVO**- Evolution (2 items), **FAU**- Fauna (532 items), **GEN**- Genitalic figures (234 items), **GEO**- Geography (17 items), **HAB**- Habitat (8 items), **KEY** – Identification keys (90 items), **LAR**- Larval morphology (21 items), **MAP**- Map (28 items), **MET**- Methodic info. (5 items), **MOR**- Morphology (633 items), **NOM** – Nomenclature (87 items), **OB**- Obituary (2 items), **PER**- Personal, biography (3 items), **PHY**- Phylogeny (36 items), **PUP**- Pupa, chrysalis (13 items), **SEM**- Sem photography (1 item), **TAX** – Taxonomy (675 items), **TRA**- Notes on travel (4 items).

## List of the publications

The items are listed below according to the author index. Contents of each publications explained by the codes in green.

1. **Abbas, M., Rafi, M.A. & M.Inayatullah**, 2002, The butterflies of Skardu Region, Pakistan. *Tax. Rep. Int. Lepid. Surv.* 3 (9): 1-16. **FAU ATL** [available in Cesa Library]
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5. **Agenjo, R.**, 1958, Tribus y Subtribus de la Subfamilia Phycitinae Cotes, 1899 (Lepidoptera, Phycitidae). *Eos* 34: 205-208. **CAT** [available in Cesa Library]

<sup>1</sup> Codes used in the publications of the Cesa are freely accessible from the following address: <http://www.members.tripod.com/entcesa/code.pdf>

<sup>2</sup> The results of the lepidopterological expedition in 1987 of the first author have been partly evaluated (Koçak, 1989 [2 publications]; Koçak & Kemal, 2012 [3 publications]).

<sup>3</sup> <http://www.cesa-tr.org/Infos.htm>

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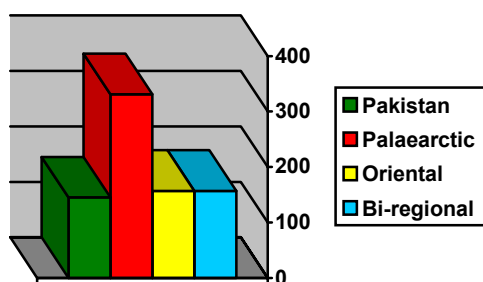
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798. **Zhdanko, A.B.**, 1995, New genus and species of Hairstreaks (Lycaenidae, Lepidoptera) from Central Asia. *Zool. Zh.* 74 (10): 120-124, 2 figs., engl. summ. [in Russian]. **TAX MOR FAU GEN KEY BIB** [available in Cesa Library]
799. **Zhdanko, A.B.**, 1995, On the systematics of the genera Lycaena F. and Heliophorus Geyer (Lepidoptera, Lycaenidae). *Ent. Obozr.* 74 (3): 652-661, figs. engl. summ. [in Russian]. **TAX MOR GEN KEY CLA DIS** [available in Cesa Library]
800. **Zhdanko, A.B.**, 1998, Type specimens of Bidaspa caerulea and Atara micans (Lepidoptera, Lycaenidae) and taxonomy of some genera from the tribe Deudorini. *Zool. Zh.* 77 (11): 1297-1304, figs. [in Russian]. **TAX MOR FAU GEN KEY BIB** [available in Cesa Library]
801. **Zolotuhin, V.V. & A.A. Perekrasnov**, 2010, A review of the Euthrix laeta (Walker, 1855) complex with description of a new species and two new subspecies (Lepidoptera, Lasiocampidae). *Atalanta* 41 (3/4): 367-374, figs. **TAX MOR FAU ATL GEN MAP** [available in Cesa Library]
802. **Zolotuhin, V.V.**, 1998, Further synonymic notes in the Lasiocampidae with the description of a new Euthrix-species (Lepidoptera, Lasiocampidae). *Entomofauna* 19 (2): 53-74, 23 figs. **TAX MOR FAU GEN BIB** [available in Cesa Library]

## 790 genus group names of 51 families in Lepidoptera of Pakistan



Before preparing the present faunal list of the Geometridae, the genus group names of 51 families of Pakistan, recorded in the database of the Cesa are separately evaluated in the following way:

In the graph, the number of the genus group taxa represented in Pakistan and neighbour countries is 145. Number of the west-central palaearctic elements in Pakistan is 331, while the number of the orientalic ones is 157.<sup>4</sup> Totally 157 generic taxa are represented in both region. According to these data,

palaearctic genera are recorded in Pakistan 41.9%.<sup>5</sup> Other rates are as follows; oriental 19.87%<sup>6</sup>, bi-regional 19.87%<sup>7</sup>, and Pakistan with neighbour countries 18.42%<sup>8</sup>. These rates are temporary, and

<sup>4</sup> For the palaearctic affinity, the result of the Lepidoptera fauna of Turkey has been taken into consideration. Similarly, for the oriental affinity, the Lepidoptera of Thailand has been used.

Koçak, A.Ö. & M. Kemal, 2009, Revised Checklist of the Lepidoptera of Turkey. *Cent. ent. Stud., Priamus Suppl.* 17: 1-253. <http://www.archive.org/details/CentreForEntomologicalStudiesAnkaraPriamusSupplement171-253>

Koçak, A.Ö. & M. Kemal, 2010, Lepidoptera of Thailand. *Cesa News* 60: 1-184, 37 figs. <http://www.archive.org/details/CentreForEntomologicalStudiesAnkaraCesaNewsNr60>

<sup>5</sup> Pakistani lepidopterous genera represented also in Palaearctic West Asia (331 genera in alphabetical order): Achyra Guenée, 1849, Acleris Hübner, [1825], Acontia (Emmelia) Hübner, [1821], Aethes Billberg, 1820, Agdistis (s.str.), Hübner, [1825], Agdistis (Tamaristis) Koçak & Kemal (MS), Agdistis Hübner, [1825], Aglais Dalman, 1816, Aglossa Latreille, 1796, Agrapha Hübner, [1821], Agriphila Hübner, [1825], Agrius Hübner, [1819], Albocosta Fibiger & Lafontaine, 1997, Amphipyra Ochsenheimer, 1816, Anaplectoides McDunnough, 1929, Anarsia (Ananarsia) Amsel, 1959, Ancylodes Ragonot, 1887, Ancylosis (Cabotia) Ragonot, 1888, Ancylosis (Heterographis) Ragonot, 1885, Ancylosis (s.str.) Zeller, 1839, Anumeta Walker, 1858, Apamea (s.str.) Ochsenheimer, 1816, Apamea Ochsenheimer, 1816, Aplocera Stephens, 1827, Apopetes Hübner, [1823], Aporia Hübner, [1819], Aporodes Guenée, 1854, Arctia (Eucharia) Hübner, [1820], Arctia Schrank, 1802, Argynnis (Fabriciana) Reuss, 1920, Argynnis (Pandoriana) B.C.S. Warren, 1942, Argynnis (Speyeria) Scudder, 1872, Armada Staudinger, 1884, Athemia Hübner, [1821], Auchmis (s.str.) Hübner, [1821], Auchmis Hübner, [1821], Autographa Hübner, [1821], Autophila Hübner, [1823], Axiopoea Ménétries, 1842, Basistriga Fibiger & Lafontaine, 1997, Bazarina Ragonot, 1887, Bembecia (Pseudosphecia) Capuse, 1973, Bembecia Hübner, [1819], Boloria (Clossiana) Reuss, 1920, Boloria (Procllossiana) Reuss, 1926, Boloria (s.str.) Moore, [1900], Boloria Moore, [1900], Boursinia Brandt, 1938, Brahmaea Walker, 1855, Bryophilopsis Hampson, 1894, Callophrys Billberg, 1820, Caradrina (Boursinidrina) Hacker, 2004, Caradrina (Eremodrina) Boursin, 1937, Caradrina (Paradrina) Boursin, 1937, Caradrina (Platyperigea) Smith, 1894, Caradrina Ochsenheimer, 1816, Carcharodus (Reverdinus) Ragusa, 1919, Carcharodus (s.str.) Hübner, [1819], Carcharodus Hübner, [1819], Cardepija Hampson, 1905, Cataglyphis Hübner, [1825], Catocala (Ephesia) Hübner, 1818, Celypha Hübner, [1825], Chazara (Neochazara) Koçak, 1989, Chazara Moore, [1893], Chersotis (s.str.) Boisduval, 1840, Chlides (Lachides) Nekrutenko, 1984, Chionoxantha Hampson, 1914, Cleonymia Berio, 1966, Clepsis Guenée, 1845, Clytie (Hypoglaucitis) Staudinger, 1895, Clytie (s.str.) Hübner, [1823], Clytie Hübner, [1823], Cnephassa (s.str.) Curtis, 1826, Cnephassa Curtis, 1826, Cochylioda Obraztsov, 1956, Cochyliis Treitschke, 1929, Coenonympha Hübner, [1819], Coleophora Hübner, 1822, Colias (Eriocollis) Watson, 1895, Colias (Neocollis) Berger, 1986, Colias Fabricius, 1807, Colostygia Hübner, [1825], Colotis (Teracolus) Swainson, [1833], Colotis Hübner, [1819], Conistra (s.str.) Hübner, [1821], Cornifrons Lederer, 1858, Cossulus Staudinger, 1887, Crombrugghia Tutt, 1906, Cryphia (Bryoleuca) Hampson, 1908, Cryphia (Bryophila) Treitschke, 1825, Cryphia Hübner, 1818, Cucullia (Shargacucullia) G. Ronkay & L. Ronkay, 1992, Cupido (s.str.) Schrank, 1801, Cybalomia Lederer, 1863, Dasyptilia Guenée, 1852, Dellephila Laspeyres, 1809, Deltote Reichenbach, 1817, Diarsia Hübner, [1821], Dichagyris Lederer, 1857, Dichrorampha Guenée, 1845, Docirava

they may be effected by the faunistic results of the studies, more concentrated in the northern areas than the southern parts of the state.

## List of the genera

In this part, the genus group taxa of the Lepidoptera of Pakistan, are listed alphabetically under the related families.

### Adelidae: Nemophora Hoffmannsegg,1798;

Walker,[1863], Drasteria Hübner,[1818], Dysauxes (s.str.) Hübner,[1819], Dysauxes Hübner,[1819], Dyscia (Warneckeella) Wehrli,1950, Dyscia Hübner,[1825], Ecyprorrhoe Hübner,[1825], Edosa Walker,1866, Electrophaes L.B.Prout,1923, Emaetheudes Zeller,1867, Emmelina Tutt,1905, Eogenes Mabille,1909, Epermenia (s.str.) Hübner,[1825], Ephysteris Meyrick,1908, Epipsamnia Staudinger,1879, Erannis Hübner,[1825], Eryniss (Hesperopogon) Seven,2002, Esperage Nekrutenko,1988, Eublemma (Coccidiphaga) Spuler,1907, Eucampyla Meyrick,1882, Euchloe (Elphinstonia) Klots,1930, Euchloe (s.str.) Hübner,[1819], Euchloe Hübner,[1819], Euchromius Guenée,1845, Eugnorisma (s.str.) Boursin,1946, Eugnorisma Boursin,1946, Eulocesta Butler,1886, Euplexia Stephens,1829, Euxoa Hübner,[1821], Euzophra (s.str.) Zeller,1867, Euzophra Zeller,1867, Faveria Walker,1859, Furcula Lamarck,1816, Gastropacha (s.str.) Ochseneimer,[1819], Gegehes Hübner,[1819], Geometra Linnaeus,1758, Glaucopsyche (tolana) Bethune-Baker,1914, Glaucopsyche (s.str.) Seudder,1872, Glaucopsyche Seudder,1872, Glossotrophia (Libanonia) Hausmann,1993, Glossotrophia (s.str.) L.B.Prout,1913, Goneteryx (s.str.) [Leach],[1815], Goneteryx [Leach],[1815], Graphantha (Dysgraphhadena) Ronkay, Varga & Fabian,1995, Hadena (Anepia) Hampson,1918, Hadena (Enterpia) Guenée,1850, Hadena (Maschukia) Hacker,1996, Hadena (s.str.(Albimaculia)) Koçak & Kemal,2006, Hadena (s.str.(Hadenobilis)) Koçak & Kemal,2006, Hadena (s.str.(Luteocincta)) Koçak & Kemal,2006, Hadena (s.str.(Magnoliadenia)) Koçak & Kemal,2006, Hadena (s.str.(Miselia)) Ochseneimer,1816, Hadena (s.str.(Turkihadena)) Koçak & Kemal,2006, Hadena Schrank,1802, Hadula (Calocestra (Hadufurca)) Koçak & Kemal,2006, Hadula (Calocestra (Hadupugnax)) Koçak & Kemal,2006, Hadula (Calocestra (Hadutrifolium)) Koçak & Kemal,2006, Hapsifera Zeller,1847, Heliothis Ochseneimer,1816, Hellinsia Tutt,1850, Hellula Guenée,1854, Hemaris (Cochrania) Tutt,1902, Hemaris (Eitschbergiera) Kemal & Koçak,2005, Hesperia Fabricius,1793, Heteropalpia Berio,1939, Himalistra Hacker & Ronkay,1993, Hipparchia (Neohipparchia) De Lesse,1951, Homoeosoma (s.str.) Curtis,1833, Homoeosoma Curtis,1833, Hoplodrina Boursin,1937, Horisme Hübner,[1825], Hyles Hübner,[1819], Hyperlais Marion,1959, Hyponephele (s.str. (Ereminephele)) Koçak & Kemal,2001, Hyponephele (s.str. (Iranonephele)) Koçak & Kemal,2001, Hyponephele (s.str. (Turaninpephele)) Koçak & Kemal,2001, Hyponephele (s.str.) Muschamp,1915, Hyponephele Muschamp,1915, Hypotia Zeller,1847, Infurcitinea Spuler,1910, Issoria Hübner,[1819], Istrianis Meyrick,1918, Isturgia Hübner,[1823], Lacaenobia (Diataraxia) Hübner,[1821], Lacaenobia Billberg,1820, Lacydes Walker,1855, Lampropteryx Stephens,1825, Lasiommatia Westwood,1841, Lepidogma Meyrick,1890, Libythea Fabricius,1807, Ligdia Guenée,[1858], Lobesia (s.str.) Guenée,1845, Lophoterges Hampson,1906, Loxostege Hübner,[1825], Lycæna (Phoenicursia) Verity,1943, Lycæna (s.str.) Fabricius,1807, Lycæna (Thersamoria) Verity,1919, Lycæna Fabricius,1807, Macdunnosthia Kostrowicki,1961, Malacosoma Hübner,[1820], Mamestra Ochseneimer,1816, Melitæa (Didymaeformis) Verity,1950, Melitæa (s.str.) Fabricius,1807, Melitæa Fabricius,1807, Mesoligia Boursin,1965, Metacnrosthis Hübner,[1820], Metalopha (s.str.) Staudinger,1892, Metalopha Staudinger,1892, Metanarsia Staudinger,1870, Muschampia Tutt,[1906], Nebraska A.Watson,1980, Nebula Brundl,[1846], Neoharpyia Daniel,1938, Nephopterix Hübner,[1825], Neptis Fabricius,1807, Noctua Linnaeus,1758, Nomophila Hübner,[1825], Nyctiodes (Eunychiodes) Wehrli,1941, Nyctiodes Lederer,1853, Nyctelia Hübner,1822, Nymphalis Kluk,1802, Ochropleura Hübner,[1821], Odontoptera Stephens,1831, Oligia Hübner,[1821], Ornativulva Gozmany,1955, Orthosia (s.str.) Ochseneimer,1816, Ozarba Walker,1865, Paidia (Conjuncta) Koçak,1991, Papilio (s.str. (Alexanoria)) Koçak & Kemal,2002, Papilio (s.str.) Linnaeus,1758, Papilio Linnaeus,1758, Pardoxia Vives & González,1981, Parnassius (Driopa) Korshunov,1988, Parnassius (s.str.) Schneider,1785, Parnassius Schneider,1785, Parornix Spuler,1910, Pediasia Hübner,[1825], Perigrapha Lederer,1857, Perissomastix (Aphrodoxa) Gozmany,1959, Perissomastix W.Warren & Rothschild,1905, Perizoma Hübner,[1825], Phaiogramma Gumpenberger,1887, Phlyctaenomorpha Amsel,1970, Phycitodes Hampson,1917, Platyptilia Hübner,[1825], Plebejus (Kretania) Beuret,1959, Plebejus (Lycaeides) Hübner,[1819], Plebejus (Plebejides) Sauter,1968, Plebejus Kluk,1802, Plodia Guenée,1845, Polia Ochseneimer,1816, Polymixis Hübner,[1820], Polymmatius (Albulina (Plebejidea)) Koçak,1983, Polymmatius (Albulina (Vacciniina)) Tutt,[1909], Polymmatius (Aricia (Eumedonia)) Forster,1938, Polymmatius (Aricia (s.str.)) Reichenbach,1817, Polymmatius (Aricia) [Reichenbach],1817, Polymmatius (s.str.) Latreille,1804, Polymmatius Latreille,1804, Pontia Fabricius,1807, Precis (Junonia) Hübner,[1819], Princeps (s.str.) Hübner,[1807], Prionapteryx Stephens,1834, Procraepia Adamczewski,1951, Prorophora (Epischidia) Ragonot,1901, Protolampra McDunnough,[1929], Pseudochazara (Achazara) Koçak,1996, Pseudochazara (s.str.) De Lesse,1951, Pseudochazara De Lesse,1951, Pseudohadena Alpheraky,1889, Pseudophilotes Beuret,1958, Pseudozarba W.Warren,1914, Pyrausta (Haemata) Hübner,1818, Pyrgus Hübner,[1819], Raphimetopus Hampson,1918, Rethera Rothschild & Jordan,1903, Rheumaptera Hübner,1822, Rhodometra Meyrick,1892, Rhodostrophia Hübner,[1823], Rhycalia (s.str.) Hübner,[1821], Rhycalia Hübner,[1821], Saturnia (Neoris) Moore,1862, Satyrium (Superflua) Strand,1910, Satyrium Scudder,1876, Satyrus (Asatyrus) Koçak & Kemal,2002, Satyrus (s.str.(s.str.)) Latreille,1810, Satyrus Latreille,1810, Scoptoteryx Hübner,[1825], Scrobipalpa (Ergasilua) Povolny,1967, Scrobipalpa (Ilseopsis) Povolny,1965, Scythocentropus Speiser,1902, Scythris Hübner,[1825], Sideridis (Luteohadena) Beck,1991, Smerinthus Latreille,[1802], Spaelotis Boisduval,1840, Spialia (Neospialia) Koçak,1989, Stannodes Guenée,[1858], Staudingeria (s.str.) Ragonot,1887, Staudingeria Ragonot,1887, Stenopilia Hübner,[1825], Stiphometasia Zerny,1914, Susia Ragonot,1888, Syncopacma Meyrick,1925, Tathorhynchus Hampson,1894, Tegostoma Zeller,1847, Tephrina Guenée,[1845], Thecla Fabricius,1807, Theclidia Boisduval,1840, Theopetus Hübner,1818, Thoria Ragonot,1888, Thria Walker,[1858], Thyridiphora W.Warren,1888, Thysanoplusia Ichinose,1973, Tortilia Chretien,1908, Trachea Ochseneimer,1816, Trichoplusia McDunnough,1944, Triphosa Stephens,1829, Turanana Bethune-Baker,1916, Uresiphitha Hübner,[1825], Venusia Curtis,1839, Vietrix (Rashia) Koçak,1989, Vulcaniella Riedl,1965, Xanthorhoe Hübner,[1825], Xestia (Megasma) Hübner,[1821], Xestia Hübner,1818, Zekelitta (Ravallita) Lödl & Mayerl,1997, Zekelitta Walker,1863, Zygaena (Agrumenia) Hübner,[1819], Zygaena (Mesembrynus) Hübner,[1819], Zygaena Fabricius,1775.

<sup>6</sup> **Pakistani lepidopterous genera represented also in Oriental region (157 genera in alphabetical order):** Achaea Hübner,[1823], Acmeshachia Matsumura,1929, Actias Leach,1815, Actyolepis Tosopelus,1927, Adisura Moore,1881, Aeromachus De Nicéville,1890, Allata Walker,1862, Anadevidia Kostrowicki,1961, Anoba Walker,1858, Anomis Hübner,[1821], Appias (Lade) De Nicéville,1887, Appias (s.str.) Hübner,[1819], Appias Hübner,[1819], Argynnis (Argyres) Scopoli,1777, Argynnis (Chilidena) Hemming,1931, Arhopala Boisduval,1832, Arichanna Moore,1868, Aroa Walker,1855, Asota Hübner,[1819], Athyma (Tatisia) Moore,[1898], Athyma Westwood,[1854], Atrophaneura (s.str. (Byasa)) Moore,1882, Atrophaneura (s.str. (Pachlioptera)) Reakirt,[1865], Attenda Swinhoe,1919, Autobia Walker,[1863], Azanus (s.str.) Moore,[1881], Azanus Moore,[1881], Badamia Moore,[1881], Bastilla Swinhoe,1918, Bibasis Moore,[1881], Brahmaea (Brahmophthalma) Mell,1929, Calleeberia Butler,1867, Caprona Wallengren,1857, Cepionodes Hübner,[1831], Cerace Walker,1863, Chilades (Luthrodes) Druce,1895, Chrysosphyruis Shiroy & Yamamoto,1956, Comatarcha Meyrick,1935, Compositena Zeller,[1854], Creatonotus Hübner,[1819], Crodolomia Zeller,1882, Cyrestis Boisduval,1832, Danaus (Saltator) Moore,[1880], Deudorix (s.str.) Hewitson,[1863], Deudorix Hewitson,[1863], Ditrigona Moore,1888, Dodona Hewitson,[1861], Ercheia Walker,[1858], Erebus Latreille,1810, Eremtoecra Zeller,1852, Ericas Walker,[1858], Erythrorupia Ichinose,1962, Eucallimophra Dubatolov,1990, Euploea (Crasia) Hübner,[1816], Eureka (Terias) Swainson,[1812], Eureka Hübner,[1819], Felinia Guenée,1852, Ganisa Walker,1855, Gastropacha (Estigena) Moore,1879, Gazalina (s.str.) Walker,1865, Gazalina Walker,1865, Gibberifera Obratzov,1946, Graphium (s.str. (Zetides)) Hübner,[1819], Graphium Scopoli,1777, Harutaeographa Yoshimoto,1993, Hasora (s.str.) Moore,[1881], Hasora Moore,[1881], Heliophorus (Kulu) Zhdanko,1995, Heliophorus (s.str.) Geyer,[1892], Heliophorus Geyer,[1892], Homona Walker,1862, Hydriolides Guenée,1854, Hypaeridia Ragonot,1888, Hyenna (Jussalypena) Lödl,1994, Hypersynoides Berio,1954, Hypertythra Guenée,[1858], Hypocla Guenée,1852, Hypopyra Guenée,1852, Ixias Hübner,[1819], Jamides Hübner,[1819], Kaniska Moore,[1899], Lemyra Walker,1856, Leptucosoma Diakonoff,1971, Lethe Hübner,[1819], Leucinodes Guenée,1854, Lixytha (Linda) Jersay,1925, Limenitis Fabricius,1807, Lobocla Moore,1884, Loboschia Diakonoff,[1968], Lophoptera Guenée,1852, Marasmia Lederer,1867, Megalorhipidia Amsel,1935, Mineogoa Hampson,1895, Mocis Hübner,[1823], Myriophlepha W.Warren,1893, Nanaguna Walker,1863, Nephela Hübner,[1819], Noorda Walker,1859, Odites (s.str.) Walsingham,1891, Odites Walsingham,1891, Odontodes Guenée,1852, Oraesia Guenée,1852, Orotholassodes Holloway,1996, Paectes Hübner,1818, Pandema Guenée,1852, Paracymoriza W.Warren,1890, Paradoxopa De Lajonquière,1976, Paralebeia Aurivillius,1894, Parantica Moore,[1880], Parmara Moore,[1881], Perigrapha (Harutaeographa) Yoshimoto,1993, Phaeosus Forbes,1922, Phalanta Horsfield,[1820], Phauda Walker,1854, Pingasa Moore,[1887], Polytrems Mabille,1904, Potanthus Scudder,1872, Precis Hübner,[1819], Princeps (s.str. (Achillides)) Hübner,[1819], Prosotas Druce,1891, Pseudocoladenia Shiroy & Saigusa,1962, Psychotopa Boisduval,1829, Psyra Walker,1860, Pygospila Guenée,1854, Rapala Moore,[1881], Rheshala Walker,1858, Rhynchina Guenée,1854, Saturnia (Rinaca) Walker,1855, Sclerogenia Ichinose,1973, Sephisia Moore,1882, Seresia Matsumura,1919, Somatina Guenée,[1858], Sortia Walker,1854, Spirama Guenée,1852, Stathmopoda Herrich-Schäffer,[1853], Stenodactyla Amsel,1997, Streblote Hübner,[1820], Syllepte Hübner,1823, Tagiades (Nestus-ur), Tagiades Hübner,[1819], Tajuria Moore,[1881], Tatrocroera Butler,[1871], Telicota Moore,[1881], Thallassodes Guenée,[1858], Thoesa Walker,1855, Thyas Hübner,[1824], Tirumala Moore,[1880], Torodora Meyrick,1894, Trabala Walker,1856, Trichosea Grote,1875, Trigonodes Guenée,1852, Trisulodes Butler,1881, Udara (s.str.) Toxopeus,1928, Udara Toxopeus,1928, Zamarada Moore,1887, Zizeeria (Pseudozeiria) Beuret,1955, Zizula Chapman,1910.

<sup>7</sup> **Pakistani lepidopterous genera represented in both regions (157 genera in alphabetical order):** Abraxas Leach,[1815], Acantholipes Lederer,1857, Acherontia [Laspeyres],1809, Acontia Ochseneimer,1816, Acrocerops Wallengren,1881, Acronicta (Triana) Hübner,1818, Acronicta Ochseneimer,1816, Agrochola Hübner,[1821], Agrotis (s.str.) Ochseneimer,1816, Agrotis Ochseneimer,1816, Alcis Curtis,1826, Amata Fabricius,1807, Anarsia (s.str.) Zeller,1839, Anarsia Zeller,1839, Ancylolomia Hübner,[1825], Apatura Fabricius,1807, Archips Hübner,1822, Ascalenia Wocke,[1876], Athetis Hübner,[1821], Azygophleps Hampson,1892, Bactra (s.str.) Stephens,1834, Biston Leach,1815, Cadra Walker,1864, Calamotropa Zeller,1863, Caloptilia Hübner,[1825], Calybites Hübner,[1822], Catocala, Catocala (s.str.) Schrank,1802, Catocala Schrank,1802, Catopisila Hübner,[1819], Celastrina Tutt,1906, Cerura Schrank,1802, Chiasmia Hübner,[1823], Chilades (Freyeria) Courvoisier,1920, Chliades Moore,[1881], Chilo Zuckerman,1871, Chrysoideis Hübner,[1821], Cigaritis Donzel,1847, Clostera Samouelle,1897, Cochyliophora Razowski,1959, Condicta Walker,1856, Cosmoterix Hübner,[1825], Criophora Snellen,1867, Cuccinia (s.str.) Schrank,1802, Cucullia Schrank,1802, Cupido (Everes) Hübner,[1819], Cupido Schrank,1801, Danaus (Anosia) Hübner,[1816], Danaus Kluk,1802, Daphnis Hübner,[1819], Dendrolimus Hübner,1821, Dichomeris Hübner,1818, Dolbina Staudinger,1887, Epermenia Hübner,[1825], Ephestia (s.str.) Guenée,1845, Ephestia Guenée,1845, Ethmia Hübner,[1819], Etiella Zeller,1839, Eublemma Hübner,[1821], Euclasta Lederer,1855, Eucosma Hübner,[1825], Eupithecia Curtis,1852, Eupoecilia Stephens,1829, Euproctis Hübner,[1819], Eutelia Hübner,[1823], Gastropacha Ochseneimer,1810, Gelechia Hübner,[1825], Gnophos Treitschke,1825, Grammodes Guenée,1852, Gysophares Meyrick,1890, Gysponoma Meyrick,1895, Helicoverpa Hardwick,1965, Hemaris Dalman,1816, Hemistola W.Warren,1881, Herpetogramma Lederer,1863, Heterolocha Lederer,1853, Homaloxestis Meyrick,1910, Hypena (s.str.) Schrank,1802, Hypena Schrank,1802, Hypolimnas Hübner,[1819], Ideia Treitschke,1825, Lamoria Walker,1863, Lampides Hübner,[1819], Leptochocra Herrich-Schäffer,[1853], Leucania Ochseneimer,1816, Lobesia Guenée,1845, Lygephila Billberg,1820, Lymantia Hübner,[1819], Macroglossum Scopoli,1777, Meganola Dyr,1898, Menophora Moore,1887, Mioleptotype Franclemont,1941, Monopis Hübner,[1825], Mythimna (Aletia) Hübner,[1821], Mythimna (Pseudaletia) Franclemont,1951, Nemophora Hoffmannsegg,1798, Neptis (s.str.) Fabricius,1807, Nymphala Schrank,1802, Ophiura Ochseneimer,1816, Opisthognathis Hübner,[1823], Orgyia Ochseneimer,1810, Orthosia Ochseneimer,1816, Ostrinia Hübner,[1825], Ourapteryx Leach,1814, Palpita Hübner,[1808], Parallelia Hübner,1818, Paraponyx Hübner,[1825], Pelochrista Lederer,1859, Pelopides Walker,1870, Pempelia Hübner,[1825], Pericyma Herrich-Schäffer,[1851], Peridea Stephens,1828, Phalaera Hübner,[1819], Phragmataeca Newman,1850, Phycodes Guenée,1852, Phyllocnistis Zeller,1848, Phyllostonycter Hübner,1822, Pieris (Artogea) Verity,1947, Pieris (s.str.) Schrank,1801, Pieris Schrank,1801, Pileocrota Guenée,1852, Polygona (Comma) Rennie,1832, Polygona Hübner,[1819], Problepsis Lederer,1856, Pyralis Linnaeus,1758, Pyrausta Schrank,1802, Scirpophaga Treitschke,1832, Scopula Schrank,1802, Scrobipalpa (s.str.) Janse,1951, Scrobipalpa Janse,1951, Setocena Wallengren,1863, Sphingonapeiopsis Wallengren,1858, Spialia (s.str.) Swinhoe,[1912], Spialia Swinhoe,[1912], Spilarctia Butler,1875, Spilosoma Curtis,1825, Spodoptera Guenée,1852, Spoladea Guenée,1854, Stauropus Germar,1812, Tarucus Moore,[1881], Tetha Ochseneimer,1816, Theretra Hübner,[1819], Thyatira Ochseneimer,1816, Thysanoplusia (Daubeiphusia) Beck,1991, Thysanoplusia (s.str.) Ichinose,1973, Tinea Linnaeus,1758, Uthetia Hübner,[1819], Vanessa (Cynthia) Fabricius,1807, Vanessa (s.str.) Fabricius,1807, Vanessa Fabricius,1807, Yponomeuta Latreille,1796, Ypthima Hübner,1818, Zeuzera Latreille,1804, Zizeeria Chapman,1910.

<sup>8</sup> **Lepidopterous genera, more confined to Pakistan and its neighbour countries (145 genera in alphabetical order):** Abrachmia Amsel,1968, Acigona Hübner,[1825], Acria Stephens,1834, Acrobola Rebell,1903, Actinor E.Y.Watson,1893, Agocera Latreille,1809, Africalpe C.G.Kruger,1939, Agalope Walker,1854, Allata (Pseudallata) Kiriakoff,1968, Amecidia Amsel,1961, Amyna Guenée,1852, Anagnorisma L.Ronkay & Varga,1999, Anasyris (Sylia) Ragonot,1887, Anonychia W.Warren,1893, Anthelia Walker,1855, Apiletria (Xystoceros) Meyrick,1914, Aporia (Metaporia (Turanoportia)) Koçak & Kemal,2001, Aporia (Metaporia) Butler,1870, Aposthes Walsingham,1907, Areas (Melanareas), Butler,1889, Argynnis (Protodryas) Reuss,1928, Alucocera Butler,1867, Auxacia Ragonot,1888, Baltia Moore,1878, Bifascia Amsel,1961, Blepharomorphia Hrebly & L.Ronkay,1998, Borchoris Moore,[1885], Bostra Walker,1863, Brachioxena Diakonoff,1968, Bryoxena Varga, L.Ronkay & Hacker,1990, Calyobathra Meyrick,1891, Caradrina (Weigertrina) Hacker,2004, Carcinopygia C.Felder & R.Felder,1874, Catopta Staudinger,1899, Cavipalpia Ragonot,1893, Celaenorrhinus Hübner,[1819], Ceutholopha Zeller,1867, Chaetoprocta De Nicéville,1890, Chirichrista Lederer,1863, Coenonympha (Lylea) Swinhoe,1890, Coniesta Hampson,1919, Craspediopsis W.Warren,1895, Crocalia Ragonot,1892, Cuphodes Meyrick,1897, Danaus (s.str.) Kluk,1802, Daona Walker,1864, Dasypolia (Sinipolia) L.Ronkay & Zilli,1992, Dentitiegumia Amsel,1961, Digama Moore,[1860], Duzulla Amsel,1952, Dysmilichia Speiser,1902, Ecceodoxa Gozmany,1973, Epichilo Ragonot,1888, Epicrocis Zeller,1848, Epiparitia Amsel,1935, Eremocossus Hampson,1892, Eremopola W.Warren,1911, Esperage (Marginare) Korb,2005, Euaspa Moore,1884, Eucrypsops Butler,1900, Euclasta (Proteuctas) Munroe,1958, Eustalodes Meyrick,1927, Eustrotia Hübner,[1821], Fergana Staudinger,1882, Garaeus Moore,[1868], Glossotrophia (Bicalcarella) Hausmann,1993, Gnamptonyx Hampson,1894, Gnophos (Ctenognophos) L.B.Prout,1915, Gnophosema L.B.Prout,1912, Gomalia Moore,1888, Gonera Moore,1879, Gonodontis Hübner,[1823], Hadena (s.str.(Hadenilla)) Koçak & Kemal,2006, Hadula (Calocestra (Furculia)) Koçak & Kemal,2008, Hadula (s.str. (Insollita)) Koçak & Kemal,2008, Haimbachia Dyr,1909, Helystogramma Zeller,1877, Heliocellus Rode,1865, Heliophorus (Nesa) Zhdanko,1995, Heliothis (Masalia) Moore,1881, Hendecasis Hampson,1896, Heterothera Inoue,1943, Hirsara Moore,1888, Homaea Guenée,1852, Hypermnestra Ménétris,1848, Hypernaia Hampson,1894, Hypocalamia Hampson,1910, Hyponephele (s.str. (Orientinephele)) Koçak & Kemal,2001, Hypotachia Hampson,1913, Kanetisa Moore,[1893], Kanaresia Moore,[1893], Limenitis (s.str.) Fabricius,1807, Lophomilia W.Warren,1912, Lophoterges (Variterges) L.Ronkay,2005, Lycæna (Hyracana) Bethune-Baker,1914, Lycæna (Mirzachania) Koçak,1996, Macalla Walker,[1859], Melatricha Ragonot,1888, Micromelalopha Nagano,1916, Minopamea Hacker & Peks,1992, Mustilia Walker,1865, Nadagara Walker,1861, Neacrostia Hampson,1907, Nemacrotia Hampson,[1893], Neolycaena (Rhytmmaria) Zhdanko,1983, Notarcha Meyrick,1884, Oecia Walsingham,1897, Oecolyce (Arletia) Hemming,1935, Oecolyce Toxopeus,1927, Oronotus (Arctonotus) Gurka & Dubatolov,2004, Palaeactia Ferguson,1984, Paralasa Moore,[1893], Parnassactia Hulstaert,1923, Pareuplexia W.Warren,1911, Peetula Moore,1888, Pentactrotus Butler,1881, Photosectia W.Warren,1888, Plebejus (Alpherakya) Zhdanko,1994, Polydicta Staudinger,1886, Polymmatius (Agridades (Mestore)) Koçak & Kemal,2007, Polymmatius (Albulina (Pamiria)) Zhdanko,1995, Polymmatius (Albulina (s.str.) Tutt,[1909]), Polymmatius (s.str. (Agrodictus (Julidus)) Koçak & Kemal,2001, Polymmatius (s.str. (Agrodictus (Paragrodictus))) Rose & Schurian,[1978], Praegnophosema Ebert,1968, Praezygna Alberti,1954, Pristathiria Ragonot,1893, Pseudosterrha W.Warren,1888, Remigia Guenée,1852, Rhabdophora Staudinger,1898, Samea Guenée,1854, Schizognorisma L.Ronkay & Varga,1999, Semiothisa Hübner,[1818], Sydia Moore,1882, Tegulifera Saalmüller,1880, Thelycloptia Meyrick,1885, Timora Walker,1856, Trachylepidia Ragonot,1887, Triphassa Hübner,1818, Urobarbia Dierl,1969, Zaranga Moore,1884, Zygaenoprocris (s.str.) Hampson,1900, Zygaenoprocris Hampson,1900, Zygoxyphia L.B.Prout,1916.

**Aganaiidae:** Asota Hübner,[1819], Digama Moore,[1860];

**Arctiidae:** Arctia (s.str.) Schrank,1802, Arctia Schrank,1802; Areas (Melanareas) Butler,1889, Axiopoea Ménétériés,1842, Carcinopyga C.Felder & R.Felder,1874, Creatonotos Hübner,[1819], Eucallimorpha Dubatolov,1990, Gonerda Moore,1879, Lacydes Walker,1855, Lemyra Walker,1856, Nebrarctia A.Watson,1980, Oroncus (Arctoroncus) Gurko & Dubatolov,2004, Paidia (Conjuncta) Koçak,1991, Paelearctia Ferguson,1984, Paramsacta Hulstaert,1923, Spilarctia Butler,1875, Spilosoma Curtis,1825, Utetheisa Hübner,[1819];

**Argynniidae:** Aglais Dalman,1816, Apatura Fabricius,1807, Argynnis (Argyreus) Scopoli,1777, Argynnis (Childrena) Hemming,1931, Argynnis (Fabriciana) Reuss,1920, Argynnis (Pandoriana) B.C.S.Warren,1942, Argynnis (Protodryas) Reuss,1928, Argynnis (Speyeria) Scudder,1872, Athyma (Tatisia) Moore,[1898], Athyma Westwood,[1850], Boloria (Clossiana) Reuss,1920, Boloria (Procllossiana) Reuss,1926, Boloria (s.str.) Moore,[1900], Boloria Moore,[1900], Cyrestis Boisduval,1832, Hypolimnas Hübner,[1819], Issoria Hübner,[1819], Kaniska Moore,[1899], Limenitis (s.str.) Fabricius,1807, Limenitis Fabricius,1807, Melitaea (Didymaeformis) Verity,1950, Melitaea (s.str.) Fabricius,1807, Melitaea Fabricius,1807, Neptis (s.str.) Fabricius,1807, Neptis Fabricius,1807, Nymphalis Kluk,1802, Phalanta Horsfield,[1829], Polygonia (Comma) Rennie,1832, Polygonia Hübner,[1819], Precis (Junonia) Hübner,[1819], Precis Hübner,[1819], Sephisia Moore,1882, Vanessa (Cynthia) Fabricius,1807, Vanessa (s.str.) Fabricius,1807, Vanessa Fabricius,1807;

**Autostichidae:** Apiletria (Xystoceros) Meyrick,1914, Oecia Walsingham,1897;

**Brachodidae:** Phycodes Guenée,1852;

**Brahmaeidae:** Brahmaea (Brahmophthalma) Mell,1929, Brahmaea Walker,1855;

**Carposinidae:** Commatarcha Meyrick,1935;

**Coleophoridae:** Coleophora Hübner,1822;

**Cosmopterigidae:** Ascalenia Wocke,[1876], Calycobathra Meyrick,1891, Cosmopterix Hübner,[1825], Vulcaniella Riedl,1965;

**Cossidae:** Azygophleps Hampson,1892, Catopta Staudinger,1899, Cossulus Staudinger,1887, Eremocossus Hampson,1892, Phragmataecia Newman,1850, Zeugera Latreille,1804;

**Ctenuchidae:** Amata Fabricius,1807, Dysauxes (s.str.) Hübner,[1819], Dysauxes Hübner,[1819], Psychotoe Boisduval,1829;

**Danaidae:** Danaus (Anosia) Hübner,[1816], Danaus (s.str.) Kluk,1802; Danaus (Salatura) Moore,[1880], Danaus Kluk,1802, Euploea (Crastia) Hübner,[1816], Parantica Moore,[1880], Tirumala Moore,[1880];

**Drepanidae:** Ditrigona Moore,1888;

**Endromidae:** Mustilia Walker,1865;

**Epermeniidae:** Epermenia (s.str.) Hübner,[1825], Epermenia Hübner,[1825];

**Eriocottidae:** Compsocena Zeller,[1854];

**Eupterotidae\*:** Ganisa Walker,1855\*;

**Ethmiidae:** Ethmia Hübner,[1819];

**Gelechiidae:** Anarsia (Ananarsia) Amsel,1959, Anarsia (s.str.) Zeller,1839, Anarsia Zeller,1839, Dichomeris Hübner,1818, Ephysteris Meyrick,1908, Eustalodes Meyrick,1927, Gelechia Hübner,[1825], Helcystogramma Zeller,1877, Istrianis Meyrick,1918, Metanarsia Staudinger,1870, Ornativulva Gozmany,1955, Scrobipalpa (Ergasiola) Povolny,1967, Scrobipalpa (Ilseopsis) Povolny,1965, Scrobipalpa (s.str.) Janse,1951, Scrobipalpa Janse,1951, Syncopacma Meyrick,1925;

**Geometridae:** Abraxas Leach,[1815], Alcis Curtis,1826, Anonymia W.Warren,1893, Aplocera Stephens,1827, Arichanna Moore,1868, Biston Leach,1815, Cataclysme Hübner,[1825], Chiasmia Hübner,[1823], Colostygia Hübner,[1825], Craspediopsis W.Warren,1895, Docirava Walker,[1863], Dyscia (Warneckeella) Wehrli,1950, Dyscia Hübner,[1825], Electrophaes L.B.Prout,1923, Erannis Hübner,[1825], Eupithecia Curtis,1825, Garaeus Moore,[1868], Geometra Linnaeus,1758, Glossotrophia (Bicalcarella) Hausmann,1993, Glossotrophia (Libanonia) Hausmann,1993, Glossotrophia (s.str.) L.B.Prout,1913, Gnophos (Ctenognophos) L.B.Prout,1915, Gnophos Treitschke,1825, Gnophosema L.B.Prout,1912, Gonodontis Hübner,[1823], Hemistola W.Warren,1893, Heterolocha Lederer,1853, Heterothera Inoue,1943, Hirsia Moore,1888, Horisme Hübner,[1825], Hyperythra Guenée,[1858], Idaea Treitschke,1825, Isturgia Hübner,[1823], Lampropteryx Stephens,1831, Ligdia Guenée,[1858], Menophra Moore,1887, Myrioblephara W.Warren,1893, Nadagara Walker,1861, Nebula Bruand,[1846], Nychiodes (Eunychiodes) Wehrli,1941, Nychiodes Lederer,1853, Odontopera Stephens,1831, Opisthograptis Hübner,[1823], Orothalassodes Holloway,1996, Ourapteryx Leach,1814, Peetula Moore,1888, Perizoma Hübner,[1825], Phaioграмма Gumpfenberg,1887, Photoscotia W.Warren,1888, Pingasa Moore,[1887], Praegnophosema Ebert,1968, Problepsis Lederer,1853, Pseudosterrha W.Warren,1888, Psyra Walker,1860, Rheumaptera Hübner,1822, Rhodometra Meyrick,1892, Rhodostrophia Hübner,[1823], Scopula Schrank,1802, Scotopteryx Hübner,[1825], Semiothisa Hübner,[1818], Somatina Guenée,[1858], Stamnodes Guenée,[1858], Tephрина Guenée,[1845], Thalassodes Guenée,[1858], Thetidia Boisduval,1840, Triphosa Stephens,1829, Venusia Curtis,1839, Xanthorhoe Hübner,[1825], Zamarada Moore,1887, Zygothyxia L.B.Prout,1916;



**Gracillariidae:** Acrocercops Wallengren,1881, Caloptilia Hübner,[1825], Calybites Hübner,1822, Cuphodes Meyrick,1897, Parornix Spuler,1910, Phyllocnistis Zeller,1848, Phyllonorycter Hübner,1822;

**Hesperiidae:** Actinor E.Y.Watson,1893, Aeromachus De Nicéville,1890, Badamia Moore,[1881], Bibasis Moore,[1881], Caprona Wallengren,1857, Carcharodus (Reverdinus) Ragusa,1919, Carcharodus (s.str.) Hübner,[1819], Carcharodus Hübner,[1819], Celaenorrhinus Hübner,[1819], Eogenes Mabilie,1909, Erynnis (Hesperopegasus) Seven,2002, Gegenes Hübner,[1819], Gomalia Moore,1879, Hasora (s.str.) Moore,[1881], Hasora Moore,[1881], Hesperia Fabricius,1793, Lobocla Moore,1884, Muschampia Tutt,[1906], Parnara Moore,[1881], Pelopidas Walker,1870, Polytrems Mabilie,1904, Potanthus Scudder,1872, Pseudocoladenia Shirozu & Saigusa,1962, Pyrgus Hübner,[1819], Seseria Matsumura,1919, Spialia (Neospialia) Koçak,1989, Spialia (s.str.) Swinhoe,[1912], Spialia Swinhoe,[1912], Tagiades (Nestus-gr), Tagiades Hübner,[1819], Taractrocera Butler,[1870], Telicota Moore,[1881];

**Lasiocampidae:** Dendrolimus Germar,1812, Gastropacha (Estigena) Moore,1879, Gastropacha (s.str.) Ochsenheimer,1810, Gastropacha Ochsenheimer,1810, Malacosoma Hübner,[1820], Paradoxopla De Lajonquière,1976, Paralebeda Aurivillius,1894, Streblote Hübner,[1820], Trabala Walker,1856;

**Lecithoceridae:** Abrachmia Amsel,1968, Ecedoxa Gozmany,1973, Homaloxestis Meyrick,1910, Lecithocera Herrich-Schäffer,[1853], Odites (s.str.) Walsingham,1891, Odites Walsingham,1891, Torodora Meyrick,1894;

**Libytheidae:** Libythea (Jera) Lindsay,1925, Libythea Fabricius,1807;

**Limacodidae:** Thosea Walker,1855;

**Lycaenidae:** Acytolepis Toxopeus,1927, Arhopala Boisduval,1832, Azanus (s.str.) Moore,[1881], Azanus Moore,[1881], Callophrys Billberg,1820, Celastrina Tutt,1906, Chaetoprocta De Nicéville,1890, Chilades (Freyeria) Courvoisier,1920, Chilades (Lachides) Nekrutenko,1984, Chilades (Luthrodes) Druce,1895, Chilades Moore,[1881], Chrysozephyrus Shirozu & Yamamoto,1956, Cigaritis Donzel,1847, Cupido (Everes) Hübner,[1819], Cupido (s.str.) Schrank,1801, Cupido Schrank,1801, Deudorix (s.str.) Hewitson,[1863], Deudorix Hewitson,[1863], Euaspa Moore,1884, Euchrysops Butler,1900, Glaucopsyche (Iolana) Bethune-Baker,1914, Glaucopsyche (s.str.) Scudder,1872, Glaucopsyche Scudder,1872, Heliophorus (Kulua) Zhdanko,1995, Heliophorus (Nesa) Zhdanko,1995, Heliophorus (s.str.) Geyer,[1832], Heliophorus Geyer,[1832], Jamides Hübner,[1819], Lampides Hübner,[1819], Lycaena (Hyracanana) Bethune-Baker,1914, Lycaena (Mirzakhanian) Koçak,1996, Lycaena (Phoenicurusia) Verity,1943, Lycaena (s.str.) Fabricius,1807, Lycaena (Thersamonia) Verity,1919, Lycaena Fabricius,1807, Neolycaena (Rhyminaria) Zhdanko,1983, Oreolyce (Arletta) Hemming,1935, Oreolyce Toxopeus,1927, Plebejus (Alpherakya) Zhdanko,1994, Plebejus (Kretania) Beuret,1959, Plebejus (Lycaeides) Hübner,[1819], Plebejus (Plebejides) Sauter,1968, Plebejus Kluk,1802, Polyommatus (Agriades (Mestore)) Koçak & Kemal,2007, Polyommatus (Albulina (Pamiria)) Zhdanko,1995, Polyommatus (Albulina (Plebejidea)) Koçak,1983, Polyommatus (Albulina (s.str.) Tutt,[1909], Polyommatus (Albulina (Vacciniina)) Tutt,[1909], Polyommatus (Aricia (Eumedonia)) Forster,1938, Polyommatus (Aricia (s.str.)) Reichenbach,1817, Polyommatus (Aricia) [Reichenbach],1817, Polyommatus (s.str. (Agrodiaetus (Juldus))) Koçak & Kemal,2001, Polyommatus (s.str. (Agrodiaetus (Paragrodiaetus))) Rose & Schurian,[1978], Polyommatus (s.str.) Latreille,1804, Polyommatus Latreille,1804, Prosotas Druce,1891, Pseudophilotes Beuret,1958, Rapala Moore,[1881], Satyrium (Superflua) Strand,1910, Satyrium Scudder,1876, Tajuria Moore,[1881], Tarucus Moore,[1881], Thecla Fabricius,1807, Turanana Bethune-Baker,1916, Udara (s.str.) Toxopeus,1928, Udara Toxopeus,1928, Zizeeria (Pseudozizeeria) Beuret,1955, Zizeeria Chapman,1910, Zizula Chapman,1910;

**Lymantriidae:** Aroa Walker,1855, Euproctis Hübner,[1819], Lymantria Hübner,[1819], Orgyia Ochsenheimer,1810;

**Momphidae:** Bifascia Amsel,1961;

**Noctuidae:** Acantholipes Lederer,1857, Achaea Hübner,[1823], Acontia (Emmelia) Hübner,[1821], Acontia Ochsenheimer,1816, Acrobyla Rebel,1903, Aconicta (Triaena) Hübner,1818, Aconicta Ochsenheimer,1816, Adisura Moore,1881, Aegocera Latreille,1809, Africalpe C.G.Krüger,1939, Agrapha Hübner,[1821], Agrochola Hübner,[1821], Agrotis (s.str.) Ochsenheimer,1816, Agrotis Ochsenheimer,1816, Albocosta Fibiger & Lafontaine,1997, Amphipyra Ochsenheimer,1816, Amyna Guenée,1852, Anadevidia Kostrowicki,1961, Anagrorisma L.Ronkay & Varga,1999, Anaplectoides McDunnough,1929, Anoba Walker,1858, Anomis Hübner,[1821], Anumeta Walker,1858, Apamea (s.str.) Ochsenheimer,1816, Apamea Ochsenheimer,1816, Apopestes Hübner,[1823], Armada Staudinger,1884, Atethmia Hübner,[1821], Athetis Hübner,[1821], Attonda Swinhoe,1919, Auchmis (s.str.) Hübner,[1821], Auchmis Hübner,[1821], Autoba Walker,[1863], Autographa Hübner,[1821], Autophila Hübner,[1823], Basistriga Fibiger & Lafontaine,1997, Bastilla Swinhoe,1918, Blepharomorpha Hreblay & L.Ronkay,1998, Boursinia Brandt,1938, Bryophilopsis Hampson,1894, Bryoxena Varga, L.Ronkay & Hacker,1990, Caradrina (Boursinidrina) Hacker,2004, Caradrina (Eremodrina) Boursin,1937, Caradrina (Paradrina) Boursin,1937, Caradrina (Platyperigea) Smith,1894, Caradrina (Weigertrina) Hacker,2004, Caradrina Ochsenheimer,1816, Cardepi Hampson,1905, Catocala (Ephesia) Hübner,1818, Catocala (s.str.) Schrank,1802, Catocala Schrank,1802, Chersotis (s.str.) Boisduval,1840, Chionoxantha Hampson,1914, Chrysodeixis Hübner,[1821], Cleonymia Berio,1966, Clytie (Hypoglaucitis) Staudinger,1895, Clytie (s.str.) Hübner,[1823], Clytie Hübner,[1823],

*Condica* Walker, 1856, *Conistra* (s.str.) Hübner, [1821], *Craniophora* Snellen, 1867, *Cryphia* (Bryoleuca) Hampson, 1908, *Cryphia* (Bryophila) Treitschke, 1825, *Cryphia* Hübner, 1818, *Cucullia* (s.str.) Schrank, 1802, *Cucullia* (Shargacucullia) G. Ronkay & L. Ronkay, 1992, *Cucullia* Schrank, 1802, *Daona* Walker, 1864, *Dasypolia* (Sinipolia) L. Ronkay & Zilli, 1992, *Dasypolia* Guenée, 1852, *Deltote* Reichenbach, 1817, *Diarsia* Hübner, [1821], *Dichagyris* Lederer, 1857, *Drasteria* Hübner, 1818, *Dysmilichia* Speiser, 1902, *Epipsammia* Staudinger, 1879, *Ercheia* Walker, [1858], *Erebus* Latreille, 1810, *Eremopola* W. Warren, 1911, *Ericeia* Walker, [1858], *Erythroplusia* Ichinose, 1962, *Eublemma* (Coccidiphaga) Spuler, 1907, *Eublemma* Hübner, [1821], *Eugnorisma* (s.str.) Boursin, 1946, *Eugnorisma* Boursin, 1946, *Eulocasta* Butler, 1886, *Euplexia* Stephens, 1829, *Eustrotia* Hübner, [1821] *Eutelia* Hübner, [1823], *Euxoa* Hübner, [1821], *Felinia* Guenée, 1852, *Fergana* Staudinger, 1892, *Gnamptonyx* Hampson, 1894, *Grammodes* Guenée, 1852, *Graphantha* (Dysgraphhadena) Ronkay, Varga & Fabian, 1995, *Hadena* (Anepia) Hampson, 1918, *Hadena* (Enterpia) Guenée, 1850, *Hadena* (Maschukia) Hacker, 1996, *Hadena* (s.str. Albimaculia) Koçak & Kemal, 2006, *Hadena* (s.str. Hadenilia) Koçak & Kemal, 2006, *Hadena* (s.str. Hadenobilis) Koçak & Kemal, 2006, *Hadena* (s.str. Luteocincta) Koçak & Kemal, 2006, *Hadena* (s.str. Magnolihadena) Koçak & Kemal, 2006, *Hadena* (s.str. Miselia) Ochsenheimer, 1816, *Hadena* (s.str. Turkihadena) Koçak & Kemal, 2006, *Hadena* Schrank, 1802, *Hadula* (Calocesta (Furculia)) Koçak & Kemal, 2008, *Hadula* (Calocesta (Hadufurca)) Koçak & Kemal, 2006, *Hadula* (Calocesta (Hadupugnax)) Koçak & Kemal, 2006, *Hadula* (Calocesta (Hadutrifolium)) Koçak & Kemal, 2006, *Hadula* (s.str. Insolita) Koçak & Kemal, 2008, *Harutaeographa* Yoshimoto, 1993, *Helicoverpa* Hardwick, 1965, *Heliocheilus* Grote, 1865, *Heliothis* (Masalia) Moore, 1881, *Heliothis* Ochsenheimer, 1816, *Heteropalpia* Berio, 1939, *Himalistra* Hacker & Ronkay, 1993, *Homaea* Guenée, 1852, *Hoplodrina* Boursin, 1937, *Hydrillodes* Guenée, 1854, *Hypena* (Jussalypena) Lödl, 1994, *Hypena* (s.str.) Schrank, 1802, *Hypena* Schrank, 1802, *Hypernaenia* Hampson, 1894, *Hypersynpoides* Berio, 1954, *Hypocala* Guenée, 1852, *Hypocalamia* Hampson, 1910, *Hypopyra* Guenée, 1852, *Hypotacha* Hampson, 1913, *Lacanobia* (Diataraxia) Hübner, [1821], *Lacanobia* Billberg, 1820, *Leucania* Ochsenheimer, 1816, *Lophomilia* W. Warren, 1912, *Lophoptera* Guenée, 1852, *Lophoterges* (Variterges) L. Ronkay, 2005, *Lophoterges* Hampson, 1906, *Lygephila* Billberg, 1820, *Macdunnoughia* Kostrowicki, 1961, *Mamestra* Ochsenheimer, 1816, *Meganola* Dyar, 1898, *Mesoligia* Boursin, 1965, *Metachrostis* Hübner, [1820], *Metaloopa* (s.str.) Staudinger, 1892, *Metaloopa* Staudinger, 1892, *Mimeugoa* Hampson, 1895, *Mniopamea* Hacker & Peks, 1992, *Mniotype* Franclemont, 1941, *Mocis* Hübner, [1823], *Mythimna* (Aletia) Hübner, [1821], *Mythimna* (Hyphilare) Hübner, [1821], *Mythimna* (Pseudaletia) Franclemont, 1951, *Nanaguna* Walker, 1863, *Neachrostia* Hampson, 1907, *Noctua* Linnaeus, 1758, *Nycteola* Hübner, 1822, *Ochropleura* Hübner, [1821], *Odontodes* Guenée, 1852, *Oligia* Hübner, [1821], *Ophiusa* Ochsenheimer, 1816, *Oraesia* Guenée, 1852, *Orthosia* (s.str.) Ochsenheimer, 1816, *Orthosia* Ochsenheimer, 1816, *Ozarba* Walker, 1865, *Paectes* Hübner, 1818, *Pandesma* Guenée, 1852, *Parallelia* Hübner, 1818, *Pardoxia* Vives & González, 1981, *Pareuplexia* W. Warren, 1911, *Pericyma* Herrich-Schäffer, [1851], *Perigrapha* (Harutaeographa) Yoshimoto, 1993, *Perigrapha* Lederer, 1857, *Plecoptera* Guenée, 1852, *Polia* Ochsenheimer, 1816, *Polymixis* Hübner, [1820], *Protolampra* McDunnough, [1929], *Pseudohadena* Alpheraky, 1889, *Pseudozarba* W. Warren, 1914, *Remigia* Guenée, 1852, *Rhabdophera* Staudinger, 1898, *Rhesala* Walker, 1858, *Rhyacia* (s.str.) Hübner, [1821], *Rhyacia* Hübner, [1821], *Rhynchina* Guenée, 1854, *Schizognorisma* L. Ronkay & Varga, 1999, *Sclerogenia* Ichinose, 1973, *Scythocentropus* Speiser, 1902, *Setoctena* Wallengren, 1863, *Sideridis* (Luteohadena) Beck, 1991, *Spaelotis* Boisduval, 1840, *Spirama* Guenée, 1852, *Spodoptera* Guenée, 1852, *Sydiva* Moore, 1882, *Tathorhynchus* Hampson, 1894, *Thria* Walker, [1858], *Thyas* Hübner, [1824], *Thysanoplusia* (Daubeiplusia) Beck, 1991, *Thysanoplusia* (s.str.) Ichinose, 1973, *Thysanoplusia* Ichinose, 1973, *Timora* Walker, 1856, *Trachea* Ochsenheimer, 1816, *Trichoplusia* McDunnough, 1944, *Trichosea* Grote, 1875, *Trigonodes* Guenée, 1852, *Trisuloides* Butler, 1881, *Victrix* (Rasihia) Koçak, 1989, *Xestia* (Megasema) Hübner, [1821], *Xestia* Hübner, 1818, *Zekelita* (Ravalita) Lödl & Mayerl, 1997, *Zekelita* Walker, 1863;

**Notodontidae:** *Acmeshachia* Matsumura, 1929, *Allata* (Pseudallata) Kiriakoff, 1968, *Allata* Walker, 1862, *Antheua* Walker, 1855, *Cerura* Schrank, 1802, *Clostera* Samouelle, 1819, *Furcula* Lamarck, 1816, *Micromelalopha* Nagano, 1916, *Neoharpyia* Daniel, 1938, *Peridea* Stephens, 1828, *Phalera* Hübner, [1819], *Stauropus* Germar, 1812, *Zaranga* Moore, 1884;

**Papilionidae:** *Atrophaneura* (s.str. (Byasa)) Moore, 1882, *Atrophaneura* (s.str. (Pachliopta)) Reakirt, [1865], *Graphium* (s.str. (Zetides)) Hübner, [1819], *Graphium* Scopoli, 1777, *Hypermnestra* Ménétériés, 1848, *Papilio* (s.str. (Alexanoria)) Koçak & Kemal, 2002, *Papilio* (s.str.) Linnaeus, 1758, *Papilio* Linnaeus, 1758, *Parnassius* (Driopa) Korshunov, 1988, *Parnassius* (s.str.) Schneider, 1785, *Parnassius* Schneider, 1785, *Princeps* (s.str. (Achillides)) Hübner, [1819], *Princeps* (s.str.) Hübner, [1807];

**Pieridae:** *Aporia* (Metaporia (Turanoporia)) Koçak & Kemal, 2001, *Aporia* (Metaporia) Butler, 1870, *Aporia* Hübner, [1819], *Appias* (Lade) De Nicéville, 1887, *Appias* (s.str.) Hübner, [1819], *Appias* Hübner, [1819], *Baltia* Moore, 1878, *Belenois* Hübner, [1819], *Catopsilia* Hübner, [1819], *Colias* (Eriocolias) Watson, 1895, *Colias* (Neocolias) Berger, 1986, *Colias* Fabricius, 1807, *Colotis* (Teracolus) Swainson, [1833], *Colotis* Hübner, [1819], *Euchloe* (Elphinstonia) Klots, 1930, *Euchloe* (s.str.) Hübner, [1819], *Euchloe* Hübner, [1819], *Eurema* (Terias) Swainson, [1821], *Eurema* Hübner, [1819], *Gonepteryx* (s.str.) [Leach], [1815], *Gonepteryx*

[Leach],[1815], *Ixias* Hübner,[1819], *Pieris* (Artogeia) Verity,1947, *Pieris* (s.str.) Schrank,1801, *Pieris* Schrank,1801, *Pontia* Fabricius,1807;

**Psychidae:** *Urobarba* Dierl,1969;

**Pterophoridae:** *Agdistis* (s.str.) Hübner,[1825], *Agdistis* (Tamaristis) Koçak & Kemal (MS), *Agdistis* Hübner,[1825], *Crombrughia* Tutt,1906, *Emmelina* Tutt,1905, *Gypsochares* Meyrick,1890, *Hellinsia* Tutt,1905, *Megalorhipida* Amsel,1935, *Platyptilia* Hübner,[1825], *Procapperia* Adamczewski,1951, *Pterophorus* Schäffer,1766, *Stenodacma* Amsel,1959, *Stenoptilia* Hübner,[1825];

**Pyralidae:** *Achyra* Guenée,1849, *Acigona* Hübner,[1825], *Aglossa* Latreille,[1796], *Agriphila* Hübner,[1825], *Amechedia* Amsel,1961, *Ancyloides* Ragonot,1887, *Ancyolomia* Hübner,[1825], *Ancylosis* (Cabotia) Ragonot,1888, *Ancylosis* (Heterographis) Ragonot,1885, *Ancylosis* (s.str.) Zeller,1839, *Ancylosis* (Syria) Ragonot,1887, *Aporodes* Guenée,1854, *Auxacia* Ragonot,1888, *Bazaria* Ragonot,1887, *Bocchoris* Moore,[1885], *Bostra* Walker,1863, *Cadra* Walker,1864, *Calamotropha* Zeller,1863, *Cavipalpia* Ragonot,1893, *Ceutholopha* Zeller,1867, *Chilo* Zincken,1817, *Cirrhochrista* Lederer,1863, *Coniesta* Hampson,1919, *Cornifrons* Lederer,1858, *Crocalia* Ragonot,1892, *Crocidolomia* Zeller,1852, *Cybalomia* Lederer,1863, *Dentitegumia* Amsel,1961, *Duzulla* Amsel,1952, *Ecpyrrhorhoe* Hübner,[1825], *Ematheudes* Zeller,1867, *Ephestia* (s.str.) Guenée,1845, *Ephestia* Guenée,1845, *Epichilo* Ragonot,1888, *Epicrocis* Zeller,1848, *Epiparthia* Amsel,1935, *Etiella* Zeller,1839, *Eucampyla* Meyrick,1882, *Euchromius* Guenée,1845, *Euclasta* (Proteuclasta) Munroe,1958, *Euclasta* Lederer,1855, *Euzophera* (s.str.) Zeller,1867, *Euzophera* Zeller,1867, *Faveria* Walker,1859, *Haimbachia* Dyar,1909, *Hellula* Guenée,1854, *Hendecasis* Hampson,1896, *Herpetogramma* Lederer,1863, *Homoeosoma* (s.str.) Curtis,1833, *Homoeosoma* Curtis,1833, *Hypargyria* Ragonot,1888, *Hyperlais* Marion,1959, *Hypotia* Zeller,1847, *Lamoria* Walker,1863, *Lepidogma* Meyrick,1890, *Leucinodes* Guenée,1854, *Loxostege* Hübner,[1825], *Macalla* Walker,[1859], *Marasmia* Lederer,1863, *Melathrix* Ragonot,1893, *Mesolia* Ragonot,1888, *Nephopterix* Hübner,[1825], *Nomophila* Hübner,[1825], *Noorda* Walker,1859, *Notarcha* Meyrick,1884, *Nymphula* Schrank,1802, *Ostrinia* Hübner,[1825], *Palpita* Hübner,[1808], *Paracymoriza* W.Warren,1890, *Parapoynx* Hübner,[1825], *Pediasia* Hübner,[1825], *Pempelia* Hübner,[1825], *Phlyctaenomorpha* Amsel,1970, *Phycitodes* Hampson,1917, *Plodia* Guenée,1845, *Prionapteryx* Stephens,1834, *Pristathria* Ragonot,1893, *Prorophora* (Epischidia) Ragonot,1901, *Pygospila* Guenée,1854, *Pyralis* Linnaeus,1758, *Pyrausta* (Haematia) Hübner,1818, *Pyrausta* Schrank,1802, *Raphimetopus* Hampson,1918, *Samea* Guenée,1854, *Scirpophaga* Treitschke,1832, *Spoladea* Guenée,1854, *Staudingeria* (s.str.) Ragonot,1887, *Staudingeria* Ragonot,1887, *Stiphrometasia* Zerny,1914, *Susia* Ragonot,1888, *Syllepte* Hübner,1823, *Tegostoma* Zeller,1847, *Tegulifera* Saalmüller,1880, *Thopeutis* Hübner,1818, *Thospia* Ragonot,1888, *Thylacoptila* Meyrick,1885, *Thyridiphora* W.Warren,1888, *Trachylepidia* Ragonot,1887, *Triphassa* Hübner,1818, *Uresiphita* Hübner,[1825];

**Riodinidae:** *Dodona* Hewitson,[1861], *Polycena* Staudinger,1886;

**Saturniidae:** *Actias* Leach,1815, *Saturnia* (Neoris) Moore,1862, *Saturnia* (Rinaca) Walker,1855;

**Satyridae:** *Aulocera* Butler,1867, *Callerebia* Butler,1867, *Chazara* (Neochazara) Koçak,1989, *Chazara* Moore,[1893], *Coenonympha* (Lyela) Swinhoe,1908, *Coenonympha* Hübner,[1819], *Esperarge* (Marginarge) Korb,2005, *Esperarge* Nekrutenko,1988, *Hipparchia* (Neohipparchia) De Lesse,1951, *Hyponephele* (s.str. (Ereminephele)) Koçak & Kemal,2001, *Hyponephele* (s.str. (Iranonephele)) Koçak & Kemal,2001, *Hyponephele* (s.str. (Orientinephele)) Koçak & Kemal,2001, *Hyponephele* (s.str. (Turaninephele)) Koçak & Kemal,2001, *Hyponephele* (s.str.) Muschamp,1915, *Hyponephele* Muschamp,1915, *Kanetisa* Moore,[1893], *Karanasa* Moore,[1893], *Lasiommata* Westwood,1841, *Lethe* Hübner,[1819], *Paralasa* Moore,[1893], *Pseudochazara* (Achazara) Koçak,1996, *Pseudochazara* (s.str.) De Lesse,1951, *Pseudochazara* De Lesse,1951, *Satyrus* (Asatyrus) Koçak & Kemal,2002, *Satyrus* (s.str.(s.str.)) Latreille,1810, *Satyrus* Latreille,1810, *Ypthima* Hübner,1818;

**Scythridae:** *Apostibes* Walsingham,1907, *Eretmocera* Zeller,1852, *Scythris* Hübner,[1825];

**Sesiidae:** *Bembecia* (Pseudosphecia) Capuse,1973, *Bembecia* Hübner,[1819];

**Sphingidae:** *Acherontia* [Laspeyres],1809, *Agrius* Hübner,[1819], *Cephonodes* Hübner,[1819], *Daphnis* Hübner,[1819], *Deilephila* Laspeyres,1809, *Dolbina* Staudinger,1887, *Hemaris* (Cochrania) Tutt,1902, *Hemaris* (Eitschbergera) Kemal & Koçak,2005, *Hemaris* Dalman,1816, *Hyles* Hübner,[1819], *Macroglossum* Scopoli,1777, *Nephele* Hübner,[1819], *Rethera* Rothschild & Jordan,1903, *Smerinthus* Latreille,[1802], *Sphingonaepiopsis* Wallengren,1858, *Theretra* Hübner,[1819];

**Stathmopodidae:** *Stathmopoda* Herrich-Schäffer,[1853], *Tortilia* Chrétien,1908;

**Stenomidae:** *Acria* Stephens,1834;

**Thaumetopoeidae:** *Gazalina* (s.str.) Walker,1865, *Gazalina* Walker,1865;

**Thyatiridae:** *Nemacerota* Hampson,[1893], *Tethea* Ochsenheimer,1816, *Thyatira* Ochsenheimer,1816;

**Tineidae:** *Edosa* Walker,1866, *Hapsifera* Zeller,1847, *Infurcitinea* Spuler,1910, *Monopis* Hübner,[1825], *Perissomastix* (Aphrodoxa) Gozmany,1959, *Perissomastix* W.Warren & Rothschild,1905, *Phaeoses* Forbes,1922, *Tinea* Linnaeus,1758;

**Tortricidae:** *Acleris* Hübner,[1825], *Aethes* Billberg,1820, *Archips* Hübner,1822, *Bactra* (s.str.) Stephens,1834, *Bactra* Stephens,1834, *Brachioxena* Diakonoff,1968, *Celypha* Hübner,[1825], *Cerace*



Walker, 1863, Clepsia Guenée, 1845, Cnephasia (s.str.) Curtis, 1826, Cnephasia Curtis, 1826, Cochylidia Obraztsov, 1956, Cochylimorpha Razowski, 1959, Cochylis Treitschke, 1929, Dichrorampha Guenée, 1845, Eucosma Hübner, [1823], Eupoecilia Stephens, 1829, Gibberifera Obraztsov, 1946, Gypsonoma Meyrick, 1895, Homona Walker, 1863, Leptecosma Diakonoff, 1971, Lobesia (s.str.) Guenée, 1845, Lobesia Guenée, 1845, Loboschiza Diakonoff, [1968], Pelochrista Lederer, 1859, Pentacitrotus Butler, 1881;

**Yponomeutidae:** Yponomeuta Latreille, 1796;

**Zygaenidae:** Agalope Walker, 1854, Phauda Walker, 1854, Praezygaena Alberti, 1954, Soritia Walker, 1854, Zygaena (Agrumenia) Hübner, [1819], Zygaena (Mesembrynus) Hübner, [1819], Zygaena Fabricius, 1775, Zygaenoprocris (s.str.) Hampson, 1900, Zygaenoprocris Hampson, 1900.

## List of the Geometridae of Pakistan

(with 22 figures)

Totally 178 species,<sup>9</sup> together with their genera are mentioned below in alphabetical order. New records to the fauna of Pakistan are marked with \*. Nomenclaturally unavailable names are marked with #.

In the present study, 8 genera and 15 species are recorded in Pakistan for the first time.

**Abraxas Leach, [1815]** (Geometridae) *Synonym(s):* *Abraxas Leach, [1815]*

1. **Abraxas fuscescens Butler, 1886** (Geometridae) *Synonym(s):* *fuscescens Butler, 1886*  
Original reference: *Abraxas fuscescens* Butler, 1886, Proc. zool. Soc. Lond. 1886: 392, pl. xxxv fig. 10.  
*Type:* [Pakistan]: Kalabagh, 16th September 1885. Range (in codes): **PK Thu Kbg IN**
2. **Abraxas intermedia W. Warren, 1888** (Geometridae) *Synonym(s):* *intermedia W. Warren, 1888; determinata W. Warren, 1894* Range (in codes): **PK Thu K-P Pj IN Ass Meg Khs**
3. **Abraxas virginalis Butler, 1886** (Geometridae) *Synonym(s):* *virginalis Butler, 1886* Original reference: *Abraxas virginalis* Butler, 1886, Proc. zool. Soc. Lond. 1886: 392, pl. xxxv fig. 11. *Type:* [Pakistan]: Murree, 13th August 1885. Range (in codes): **PK Mre Pj Nar** (present record)  
Material examined: 1♂ Hazara: Naran village 2450m 10 07 1987.

**Alcis Curtis, 1826** (Geometridae) *Synonym(s):* *Alcis Curtis, 1826; Poecilalcis W. Warren, 1893; Dictyodea Wehrli, 1934; Alcisca Wehrli, 1943* Original reference: *Alcis* Curtis, 1826, Br. Ent. 3: 113. *Type-species:* *Phalaena repandata* Linnaeus, 1758, Syst. Nat. (Edn. 10) 1: 524, by original designation.

4. **Alcis holophaearia (Hampson, 1907)** (Geometridae) *Synonym(s):* *holophaearia Hampson, 1907*  
Range (in codes): **Ch Pj PK IN**
5. **Alcis iterata (Butler, 1886)** (Geometridae) *Synonym(s):* *iterata Butler, 1886* Original reference: *Boarmia iterata* Butler, 1886, Proc. zool. Soc. Lond. 1886: 389. *Syntypes:* [Pakistan]: Murree, Kala Pani. Range (in codes): **PK Thu Mre K-P**
6. **Alcis nudipennis W. Warren, 1888** (Geometridae) *Synonym(s):* *nudipennis W. Warren, 1888*  
Original reference: *Alcis nudipennis* W. Warren, 1888, Proc. zool. Soc. Lond. 1888: 320-321. *Syntypes* 2♂: [Pakistan]: Thundiani, August & September, 1886. Range (in codes): **PK Thu Mre NP**  
**Alcis nudipennis nudipennis W. Warren, 1888** (Geometridae) *Synonym(s):* *nudipennis W. Warren, 1888* Original reference: *Alcis nudipennis* W. Warren, 1888, Proc. zool. Soc. Lond. 1888: 320-321. *Syntypes* 2♂: [Pakistan]: Thundiani, August & September, 1886. Range (in codes): **PK Thu Mre**
7. **Alcis trikotaria (R. Felder & Rogenhofer, [1875])** (Geometridae) *Synonym(s):* *trikotaria (R. Felder & Rogenhofer, [1875])* Range (in codes): **PK Thu AF Nu Ng**

<sup>9</sup> This is 13.61% of the known species of Pakistan.

**Alcis trikotaria trikotaria (R.Felder & Rogenhofer,[1875])** (Geometridae) **Synonym(s):** *trikotaria* R.Felder & Rogenhofer,[1875]; *sublanosa* Wehrli,1943 Range (in codes): **PK Thu**

**Anonymia W.Warren,1893** (Geometridae) **Synonym(s):** *Anonymia* W.Warren,1893

- 8. Anonymia rostrifera (W.Warren,1888)** (Geometridae) **Synonym(s):** *rostrifera* W.Warren,1888 Original reference: *Cidaria rostrifera* W.Warren,1888, Proc. zool. Soc. Lond. 1888: 330. Type ♂: [Pakistan]: Berham Gully (nr.Murree), September 24 1885. Range (in codes): **PK Mre Swa Sgl Yek** (present records)  
Material examined: 5♂♂ Swat: Shangla Forest 2100m 27 06 1987 (**Fig.1**); 1♂ Swat: Yekhtangi Forest 2100m 24 06 1987; 1♂ Swat: Yekhtangi Forest 2100m 25 06 1987.

**Aplocera Stephens,1827** (Geometridae) **Synonym(s):** *Aplocera* Stephens,1827; *Anaitis* Duponchel,1829; *Larissa* Curtis,1830; *Haplocera* Agassiz,1847 Original reference: *Aplocera* Stephens,1827, Retrospective Review (2) 1: 243. Type-species: *Phalaena plagiata* Linnaeus,1758.

- 9. Aplocera efformata (Guenée,[1858])** (Geometridae) **Synonym(s):** *efformata* Guenée,[1858]; *pallidata* Staudinger,1870 Original reference: *Anaitis efformata* Guenée,[1858], [in] Boisduval & Guenée, Hist. nat. Insectes (Spec. gen. Lepid.) 10: 500. Type ♂: Syria. Range (in codes): **PT ES FR Co Si? IT MT GB BE NL LU DE CH AT PL CZ SK HU YU AL BG GR Cr Rd TR DK NO SE LV LT RU MD UA BY PK Thu**

**Arichanna Moore,1868** (Geometridae) **Synonym(s):** *Rhyparia* Hübner,[1825] *nec* Hbn.,[1820]; *Arichanna* Moore,1868; *Icterodes* Butler,1878; *Paricterodes* W.Warren,1893; *Hemipyrrha* Grote,1896; *Phyllabraxas* Leech,1897; *Epicterodes* Wehrli,1933

- 10. Arichanna diversicolor (W.Warren,1888)** (Geometridae) **Synonym(s):** *diversicolor* W.Warren,1888 Original reference: *Abraxas diversicolor* W.Warren,1888, Proc. zool. Soc. Lond. 1888: 325. Syntypes 1♂ 2♀: [Pakistan]: Thundiani August 15, 1886. Range (in codes): **PK Thu Mre**

**Ascotis Hübner,[1825]\***

- 11. Ascotis selenaria ([Denis & Schiffermüller],1775)\***  
Material examined: 1♀ Swat: Kalam 2100m 19 06 1987; 4♂ Swat: Karakar Pass 1400m 30 06 1987; 1♀ Swat: Karakar Pass 1300-1400m 01 07 1987 *Moths were taken at the light trap between 9.00 and 11.00 p.m.*; 1♂ Swat: Malakhazar, SE Saidu Sharif 1400m 29 06 1987 *Moths were taken at the light trap*; 1♀ Swat: Shangla Forest 2100m 27 06 1987 (**Fig.2**).

**Biston Leach,1815** (Geometridae) **Synonym(s):** *Biston* Leach,1815; *Dasyphara* Billberg,1820; *Pachys* Hübner,1822; *Eugyja* Hübner,[1825]; *Amphidasys* Treitschke,1825; *Amphidasys* Sodoffsky,1837; *Amphidasea* Unger,1856; *Buzura* Walker,[1863]; *Culcula* Moore,1888; *Eubyjodonta* W.Warren,1893; *Blepharoctenia* W.Warren,1894; *Epamraica* Matsumura,1910; #*Bazura* Hutacharern & Tubtim,1995

- 12. Biston regalis Moore,1888** (Geometridae) **Synonym(s):** *regalis* Moore,1888 Original reference: *Biston regalis* Moore,1888, [in] Hewitson & Moore, Descr. new Indian lepid. Insects Colln late Mr. Atkinson: 234. Range (in codes): **IN SI DjI PK Swa Sgl** (present record) **RU Am Prj Us JP ID Ja TH Nna Kao**  
Material examined: 1♂ 1♀ Swat: Shangla Forest 2100m 27 06 1987.

**Chiasmia Hübner,[1823]** (Geometridae) **Synonym(s):** *Chiasmia* Hübner,[1823]; *Arte* Stephens,1829; *Hercyna* Stephens,1829 *nec* Treit.,1828; *Strenia* Duponchel,1829; *Sternia* Kolenati,1846; *Osteodes* Guenée,[1858] *nec* Conrad,1855; *Discalma* Meyrick,1892; *Tephropsis* W.Warren,1896; *Xenoneura* W.Warren,1896;

*Hyostomodes* W.Warren,1897; *Peridela* W.Warren,1897; *Iulocera* W.Warren,1905; *Allochrosis* Strand,1912; *Neomacaria* Wehrli,1937; *Thyridesia* Wehrli,1940; #*Chiasama* Hutacharern & Tuhtim,1995

**13. Chiasmia aestimaria (Hübner,[1809])\***

Material examined: 1 ♂ Pakistan: Gilgit 1500m, 20 07 1987 (**Fig.3**).

**14. Chiasmia fidoniata (Guenée,[1858])** (Geometridae) Synonym(s): *fidoniata* Guenée,[1858]; *cacavena* Walker,1861; *arenaria* Swinhoe,1885; *lineata* W.Warren,1899 Range (in codes): **IN Mhw Sml PK Krc Cp LK MY TH CMa CN**

**15. Chiasmia frugaliata (Guenée,[1858])** (Geometridae) Range (in codes): **IN Drm Bba LK PK Krc TH Cph**

**16. Chiasmia pluviata (Fabricius,1798)** (Geometridae) Synonym(s): *pluviata* Fabricius,1798; *sufflata* Guenée,[1858]; *breviusculata* Walker,[1863]; *diplotata* R.Felder & Rogenhofer,1875; *horridaria* Moore,1888 Range (in codes): **IN CN Ben SI Djl Bba PK Cp Pj TH Bnk Phr**

**Chiasmia pluviata fuscomarginata (W.Warren,1888)** (Geometridae) Synonym(s): *fuscomarginata* W.Warren,1888 Original reference: *Gonodela fuscomarginata* W.Warren,1888, Proc. zool. Soc. Lond. 1888: 323. Type ♀: [Pakistan]: Campbellpore July 19, 1886. Range (in codes): **PK Cp Pj**

Material examined: 1 ♂ Pakistan Swat Karakar 1400m, 2 7 1987 (**Fig.4**).

**17. Chiasmia sufflata (Guenée,[1858])** (Geometridae) Synonym(s): *sufflata* Guenée,[1858] Range (in codes): **PK Rw TH CMa CDo Dsk**

**Chlorissa Stephens,1831\***

**18. Chlorissa gelida (Butler,1889)\***

Material examined: 1 ♂ Hazara: Chatter Hills 1700m 12 07 1987; 1 ♀ Swat: E. Madyan Dara valley 1400m 23 06 1987; 6 ♀ Swat: Karakar Pass 1400m 2 07 1987; 1 ♂ Swat: Madyan 1400m 22 06 1987 (*Gen. Prep. no 1145*); 1 ♀ Swat: Malakhazar, SE Saidu Sharif 1400m 29 06 1987 *Moths were taken at the light trap*; 1 ♂ Swat: Shangla Forest 2100m 27 06 1987.

**Chloroglyphica W.Warren,1894** (Geometridae) Synonym(s): *Chloroglyphica* W.Warren,1894

**19. Chloroglyphica variegata (Butler,1889)** (Geometridae) Synonym(s): *variegata* Butler,1889 Range (in codes): **PK Mre IN Hp Drm Kgr TH**

**Coenina Walker,1860\***

**20. Coenina collenettei L.B.Prout,1931\***

Material examined: 1 ♀ Swat: Karakar Pass 1400m 2 07 1987 (**Fig.5**).

This species was originally described from Somalia. In Pakistan, it is recorded here for the first time.

**Colostygia Hübner,[1825]** (Geometridae) Synonym(s): *Colostygia* Hübner,[1825]; *Amoebe* Hübner,[1825]; *Erinobia* Stephens,1850 Original reference: *Colostygia* Hübner,[1825], Verz. bekannter Schmett.: 328. Type-species: *Geometra turbata* Hübner,[1799], Samml. eur. Schmett. 5: pl.49 fig.255, by subsequent designation by Hulst,1896, Trans. Am. ent. Soc. 23: 292.

**21. Colostygia albigrata (Kollar,[1844])** (Geometridae) Synonym(s): *albigrata* Kollar,[1844]; *serpentinata* Lederer,1853; *signata* Moore,1868; *thomasata* W.Warren,1888; #*thomassata* Ollenshaw,2011 Range (in codes): **Ch RU Sb PK Thu Mre Swa Yek (present record) IN Mus SI Djl AF**

Material examined: 1 ♀ Swat: Yekhtangi Forest 2100m 24 06 1987 (**Fig.6**).



**Craspediopsis W.Warren,1895** (Geometridae) Synonym(s): *Craspediopsis W.Warren,1895*; *Erythrolophus Hampson,1896*

**22.Craspediopsis persimilis (Moore,1888)** (Geometridae) Synonym(s): *persimilis Moore,1888*  
Original reference: *Craspedia persimilis Moore,1888*, Descr. lepid. Colln. Atkinson 3: 254. Type: N.W.India (BMNH). Range (in codes): **IN PK K-P**

**Docirava Walker,[1863]** (Geometridae) Synonym(s): *Docirava Walker,[1863]* Original reference: *Docirava Walker,[1863]*, List spec. lepid. Ins. Colln Br. Mus. 26: 1635.

**23.Docirava aequilineata Walker,[1863]** (Geometridae) Synonym(s): *aequilineata Walker,[1863]*  
Original reference: *Docirava aequilineata Walker,[1863]*, List spec. lepid. Ins. Colln. Br. Mus. 26: 1635.  
Range (in codes): **PK Abb IN**

**Dyscia Hübner,[1825]** (Geometridae) Synonym(s): *Dyscia Hübner,[1825]*; *Scodiona Boisduval,1840*. Original reference: *Dyscia Hübner,[1825]*, Verz. bekannter Schmett.: 314. Type-species: *Geometra conspersaria* [Denis & Schiffermüller],1775.

**Dyscia (Warneckeella) Wehrli,1950** (Geometridae) Synonym(s): *Warneckeella Wehrli,1950*  
Original reference: *Warneckeella Wehrli,1950*, Ent. Ber., Amst. 13: 77. Type-species: *Dyscia malatyana Wehrli,1934*, by original designation.

**24.Dyscia (Warneckeella) malatyana (Wehrli,1934)** (Geometridae) Synonym(s): *malatyana Wehrli,1934* Original reference: *Dyscia malatyana Werli,1934*, Int. ent. Z. 27: 535-536, fig.19. Syntypes 3♂: [Türkei]: Malatya: Tecde (ZFMK). Range (in codes): **LY TR Cc AZ AM GG RU Ao Da IR Ss TM Kp KG Kmk Tk Dj UZ KK AF PK CN T-S Kno**

**Dyscia (Warneckeella) malatyana albersaria Warnecke,1940** (Geometridae) Synonym(s): *albersaria Warnecke,1940*; *nachadira Brandt,1941*; *#theodoraria Warnecke,1941*. Original reference: *Dyscia albersaria Warnecke,1940*, Mitt. münch. ent. Ges. 30: 1048-1049 fig.4. Type: [Turkmenistan]: Achal Tekke (leg.Christoph). Range (in codes): **IR Ss TM Kp KG Kmk Tk Dj RU Ao UZ KK AF PK CN T-S Kno**

**Electrophaes L.B.Prout,1923** (Geometridae) Synonym(s): *Electrophaes L.B.Prout,1923*

**25.Electrophaes fulgidaria (Leach,1897)** (Geometridae) Synonym(s): *fulgidaria Leach,1897*  
Range (in codes): **IN Drm Khs BT SI CN Ti PK Mre**

**26.Electrophaes perpulchra (Butler,1886)** (Geometridae) Synonym(s): *perpulchra Butler,1886*  
Original reference: *Cidaria perpulchra Butler,1886*, Proc. zool. Soc. Lond. 1886: 393. Type: [Pakistan]: Murree, 8th August 1885. Range (in codes): **PK Mre**

**Erannis Hübner,[1825]** (Geometridae) Synonym(s): *Erannis Hübner,[1825]*; *Hybernia Berthold,1827*; *Lampetia Stephens,1827*; *Chimadia Speyer,1839*; *Thriptera Gistel,1848* Original reference: *Erannis Hübner,[1825]*, Verz. bekannter Schmett. (20): 320.

**27.Erannis kashmirensis Laszlo,2003** (Geometridae) Synonym(s): *kashmirensis Laszlo,2003*  
Original reference: *Erannis kashmirensis Laszlo,2003*, Acta zool. hung. 49: 154-156, figs. Holotype ♂: Pakistan, Kashmir, Deosai Mts. Bubin, 3150m (HNHM). Range (in codes): **Ch Deo Bt PK**

**Euphyia Hübner,[1825]\***

**28.Euphyia ochreatea (Moore,1888)\***

**Material examined:** 3♂ Hazara: Naran village 2450m 09 07 1987; 1♂ Hazara: Naran village 2450m 10 07 1987; 1♀ Swat: Shangla Forest 2170m 26 06 1987 *Heliophil specimens were captured in the glades*; 17♂♀ Swat: Shangla Forest 2100m 27 06 1987; 2♀ Swat: Yekhtangi Forest 2100m 24 06 1987; 1♂ Swat, Kalam 2000m, 20 6 1987 (**Fig.7**).

This species was described from Darjiling (Sikkim), also known from Afghanistan. It was recorded in North Pakistan in forest zone, for the first time.

## 29. *Euphyia subangulata* (Kollar,[1844])\*

**Material examined:** 1♀ Hazara: Naran village 2450m 09 07 1987; 1♀ Hazara: Naran, Katha village 2700-2800m 11 07 1987; 20♂♀ Swat: Shangla Forest 2100m 27 06 1987; 1♀ Swat: Yekhtangi Forest 2100m 25 06 1987.

This species was described from Massuri (North India), like the preceeding species known also from Afghanistan. It was recorded in North Pakistan in forest zone, for the first time.

**Eupithecia Curtis,1825** (Geometridae) **Synonym(s):** *Eupithecia* Curtis,1825; *Arcyonia* Hübner,[1825]; *Dyscymatoge* Hübner,[1825]; *Eucymatoge* Hübner,[1825]; *Hyperirritis* Hübner,[1825]; *Leucocora* Hübner,[1825]; *Tarachia* Hübner,[1825]; *Tephroclysta* Hübner,[1825]; *Zygmena* Boie,1839; *Lepiodes* Guenée,1858; *Pena* Walker,1863; *Epicaste* Gumpfenberg,1887; *Dietzea* Schütze,1956; *Petersenia* Schütze,1958; *Bohatschia* Schütze,1960; *Delaeveria* Schütze,1961; *Catarina* Vojnits & De Laever,1973; *Propithecia* Vojnits,1985; *Heteropithecia* Vojnits,1985; *Neoithecia* Vojnits,1985.

**30. *Eupithecia acolpodes* L.B.Prout,1938** (Geometridae) **Synonym(s):** *acolpodes* L.B.Prout,1938  
Range (in codes): **Ch PK Swa Klm Bt Deo**

**31. *Eupithecia acutangula* Hampson,1895** (Geometridae) **Synonym(s):** *acutangula* Hampson,1895  
Range (in codes): **IN Hp Dlh PK Ch**

**32. *Eupithecia albigutta* L.B.Prout,1958** (Geometridae) **Synonym(s):** *albigutta* L.B.Prout,1958; *pulla* Vojnits,1988  
Range (in codes): **NP IN Hp Sml Ch PK Pj**

**33. *Eupithecia anemica* Viidalepp,1988** (Geometridae) **Synonym(s):** *anemica* Viidalepp,1988  
Range (in codes): **TJ KG Aa TrA PK KK**

**34. *Eupithecia assectata* Dietze,1904** (Geometridae) **Synonym(s):** *assectata* Dietze,1904  
Range (in codes): **PK Sha UZ Smk KK Ik**

**35. *Eupithecia conjunctiva* Hampson,1895** (Geometridae) **Synonym(s):** *conjunctiva* Hampson,1895  
Range (in codes): **IN Drm Hp PK Pj Mre Ch**

**36. *Eupithecia contraria* Vojnits,1983** (Geometridae) **Synonym(s):** *contraria* Vojnits,1983; *fuscoferruginea* Inoue,1987  
Range (in codes): **NP PK Nar**

**37. *Eupithecia costipicta* W.Warren,1893** (Geometridae) **Synonym(s):** *costipicta* W.Warren,1893  
Range (in codes): **IN SI PK Ch Bt Deo**

**38. *Eupithecia dzhirgatalensis* Viidalepp,1988** (Geometridae) **Synonym(s):** *dzhirgatalensis* Viidalepp,1988  
Range (in codes): **Ch PK Bt Deo TJ**

**39. *Eupithecia emittens* Inoue,1996** (Geometridae) **Synonym(s):** *mystica* Vojnits,1988 *nec* Dietz.,1910; *emittens* Inoue,1996; *schungqar* Koçak & Kemal,2001.  
Range (in codes): **TJ Pm PK PK Bt Skd Gg IN Ld**

**40. *Eupithecia exactata* Staudinger,1882** (Geometridae) **Synonym(s):** *exactata* Staudinger,1882; *modesta* Dietze,1910 *nec* Tayl.,1906; *opulenta* Vojnits,1982; *subolivacea* Inoue,1996.  
Range (in codes): **IR Elb CN Ui Au Kl NrK KG Tk T-S Mn Ssn PK Gg Ch IN Ld**

- 41. *Eupithecia fletcheri* L.B.Prout,1926** (Geometridae) Synonym(s): *fletcheri* L.B.Prout,1926; *hypognampta* L.B.Prout,1938 Range (in codes): **IN Kma Hp Dlh PK Nwf Mre Pj Ch**
- 42. *Eupithecia hannemanni* Vojnits & Laever,1973** (Geometridae) Synonym(s): *hannemanni* Vojnits & Laever,1973; *manca* Vojnits,1979 Range (in codes): **IR Fa Kz Com PK Swa CN She**
- 43. *Eupithecia impavida* Vojnits,1979** (Geometridae) Synonym(s): *impavida* Vojnits,1979; *secura* Vojnits,1979; *commiserenda* Vojnits,1983 Range (in codes): **CN She Yu NP PK Gg Mre Pj**
- 44. *Eupithecia incurvaria* Hampson,1903** (Geometridae) Synonym(s): *incurvaria* Hampson,1903; *propoxydata* Schütze,1961 Range (in codes): **PK Swa Klm IN NP Ch**
- 45. *Eupithecia infecunda* Vojnits,1981** (Geometridae) Synonym(s): *infecunda* Vojnits,1981 Range (in codes): **PK Klm**
- 46. *Eupithecia interrubescens* (Hampson,1902)** (Geometridae) Synonym(s): *interrubescens* Hampson,1902 Range (in codes): **CN Ti Ch PK Mre Pj Swa Yek** (present record) **IN Dlh Hp SI**  
Material examined: 1♂ Pakistan-Swat, Yekhtangi 2100m, 24 06 1987 (**Fig.8**).
- 47. *Eupithecia jezonica* Matsumura,1927** (Geometridae) Synonym(s): *jezonica* Matsumura,1927; *viidaleppi* Vojnits,1981; *catosophia* Inoue,1988 Range (in codes): **JP Hkk PK Rw Pj IN Hp Kma Ld CN Yu TW RU Us**
- 48. *Eupithecia karnaliensis* Inoue,2000** (Geometridae) Synonym(s): *emikoe* Inoue,1996 (p.p.); *karnaliensis* Inoue,2000 Range (in codes): **NP IN Ch PK Ld**
- 49. *Eupithecia leucostaxis* L.B.Prout,1926** (Geometridae) Synonym(s): *leucostaxis* L.B.Prout,1926; *deprima* Vojnits,1974 Range (in codes): **MM PK Pj Rw Thu IN Up Hp Sml CN Yu**
- 50. *Eupithecia lindti* Viidalepp,1988** (Geometridae) Synonym(s): *lindti* Viidalepp,1988; *hangayorum* Vojnits,1988 Range (in codes): **UZ TJ IN Ld PK Gg**
- 51. *Eupithecia maculosa* Vojnits,1981** (Geometridae) Synonym(s): *maculosa* Vojnits,1981; *flavitorinata* Herbulot,1984 Range (in codes): **NP Ch PK**
- 52. *Eupithecia marginata* Staudinger,1892** (Geometridae) Synonym(s): *marginata* Staudinger,1892 Original reference: *Eupithecia marginata* Staudinger,1892, Dt. ent. Z., Iris 5: 257-258. Syntypes: [China]: Kuldja. Range (in codes): **TR CY CN Ui Ku Ld PK Gg**
- 53. *Eupithecia mesodeicta* L.B.Prout,1938** (Geometridae) Synonym(s): *mesodeicta* L.B.Prout,1938; *aspectabilis* Inoue,1996 Range (in codes): **Ch IN PK**
- 54. *Eupithecia mima* Mironov,1989** (Geometridae) Synonym(s): *mima* Mironov,1989 Range (in codes): **MN UZ KG PK Gg Pj Rw**
- 55. *Eupithecia mustangata* Schütze,1961** (Geometridae) Synonym(s): *mustangata* Schütze,1961; *emikoe* Inoue,1996 Range (in codes): **NP PK Swa Bt Deo Ld**
- 56. *Eupithecia nepalata* Schütze,1961** (Geometridae) Synonym(s): *nepalata* Schütze,1961; *abundeli* Vojnits,1988; *petrensis* Mironov,1989 Range (in codes): **NP TJ Pm Chr PK Sha IN Ch Bt Deo**
- 57. *Eupithecia nephelata* Staudinger,1897** (Geometridae) Synonym(s): *nephelata* Staudinger,1897 Range (in codes): **MN CN Ui Kl PK Gg Sst Ld IN**
- 58. *Eupithecia nigrilinea* (W.Warren,1896)** (Geometridae) Synonym(s): *nigrilinea* W.Warren,1896; *ingrata* Vojnits,1981; *talvei* Viidalepp,1988 Range (in codes): **PK Klm Swa IN Ld Ch TJ**
- 59. *Eupithecia oblongata* (Thunberg,1784)** (Geometridae) Synonym(s): *#centaureata* [Denis & Schiffermüller],1775; *oblongata* Thunberg,1784; *boloniensis* Fourcroy,1875; *centralisata* Staudinger,1892; *chinae*



Vojnits,1977. Original reference: Geometra oblongata Thunberg,1784, Diss. ent. sistens Insecta Suecica 1: 14. Lectotype ♂ (UZI). Range (in codes): **MA DZ TN PT ES FR Co Sa Si IT MT IE GB BE NL LU DE CH AT PL CZ SK HU RO YU AL BG GR Cr Rd CY TR Cc GG AM AZ DK NO SE FI EE LV LT RU Da MD UA BY KG Tk CN Ui Ku Stg IL Pa Car Jf LB Bsa PK Ch IN Ld Gg**

- 60. Eupithecia ochracea (W.Warren,1888)** (Geometridae) Synonym(s): *ochracea* W.Warren,1888; *nova* Vojnits,1974 *nec* Vojn. & Delaev.,1973; *babur* Koçak & Kemal,2001. Original reference: *Asthena ochracea* W.Warren,1888, Proc. zool. Soc. Lond. 1888: 321-322. Syntypes 2 ♀: [Pakistan]: Thundiani, August 17, 1886 [cf. Syntypes: [Pakistan], [India] Khasi hills, Shillong (BMNH)]. Range (in codes): **PK Pj Thu Rw IN Meg Khs Ass Slo Hp Kma CN Yu**
- 61. Eupithecia pamirica Viidalepp,1988** (Geometridae) Synonym(s): *pamirica* Viidalepp,1988 Range (in codes): **TJ Pm KK PK Gg**
- 62. Eupithecia parallelaria Bohatsch,1893** (Geometridae) Synonym(s): *parallelaria* Bohatsch,1893 Original reference: [Eupithecia] unedonata var. *parallelaria* Bohatsch,1893, Dt. ent. Z., Iris 6: 22. Lectotype: Corsica (TMP) [uninominal, unavailable name!]. Range (in codes): **ES FR Co LB Bei TM Kp UZ CN Ui Kl Ch PK Gg**
- 63. Eupithecia particeps Vojnits,1988** (Geometridae) Synonym(s): *particeps* Vojnits,1988 Range (in codes): **NP PK Ch**
- 64. Eupithecia pusillata (Fabricius,1787)** (Geometridae) Synonym(s): *#pusillata* [Denis & Schiffermüller],1775; *pusillata* Fabricius,1787; *sobrinata* Hübner,[1817]; *pusillaria* Hübner,[1825]; *sobrinaria* Boisduval,1840; *expressaria* Herrich-Schäffer,1848; *anglicata* Herrich-Schäffer,1863; *latoniata* Millière,1882; *stevensata* Webb,1896; *scotica* Dietze,1910 Original reference: *Phalaena pusillata* Fabricius,1787, Mant. Ins. 2: 212, nr.224. Type(s): Austria. Range (in codes): **ES FR Co IT IS IE GB BE NL DE CH AT PL CZ SK HU RO YU AL BG GR TR Cc GG DK NO SE FI EE LV LT RU MD UA BY Ch PK Bt Deo**  
**Eupithecia pusillata kashmirica Mironov & Ratzel,2008** (Geometridae) Synonym(s): *kashmirica* Mironov & Ratzel,2008 Range (in codes): **PK Bt Deo**
- 65. Eupithecia quadripunctata W.Warren,1888** (Geometridae) Synonym(s): *quadripunctata* W.Warren,1888; *tricornuta* Inoue,1980; *abiecta* Vojnits,1980 Original reference: *Eupithecia quadripunctata* W.Warren,1888, Proc. zool. Soc. Lond. 1888: 331. Type ♀: [Pakistan]: Thundiani, April 30 1887. Range (in codes): **PK Thu Pj RU Us KP KR JP CN She Mc TW PK Pj Thu Ch NP**
- 66. Eupithecia rajata Guenée,[1858]** (Geometridae) Synonym(s): *rajata* Guenée,[1858]; *apparticeps* Inoue,2000 Range (in codes): **IN Ld Hp CN Yu PK Swa**
- 67. Eupithecia relaxata Dietze,1904** (Geometridae) Synonym(s): *relaxata* Dietze,1904; *vicariata* Dietze,1904; *adjunctata* Dietze,1904; *costisignata* Dietze,1904; *pamiri* Vojnits,1988 Range (in codes): **IR Elb Shh TJ UZ CN Ui Kl TJ Pm PK Bt Skd**
- 68. Eupithecia repetita Vojnits,1981** (Geometridae) Synonym(s): *repetita* Vojnits,1981 Range (in codes): **PK Klm Swa Ch**
- 69. Eupithecia robiginascens L.B.Prout,1926** (Geometridae) Synonym(s): *robiginascens* L.B.Prout,1926; *captiosa* Vojnits,1984 Range (in codes): **IN SI MM Ass Meg Khs BT PK CN Yu**
- 70. Eupithecia ruficorporis (W.Warren,1897)** (Geometridae) Synonym(s): *ruficorporis* W.Warren,1897 Range (in codes): **PK Pj Rw IN Ass Meg Khs**
- 71. Eupithecia silenicolata Mabille,1867** (Geometridae) Synonym(s): *silenicolata* Mabille,1867 Original reference: *Eupithecia silenicolata* Mabille,1867, Annls Soc. ent. Fr. (4) 6: 562, pl.8 figs. Lectotype ♀: Corsica: Bastia (ZSM). Range (in codes): **MA FR Co IT CH? AT SK HU RO YU BG GR TR LB Bei Bsa IR Lo Ab PK Sha Ld**
- 72. Eupithecia subrubescens (W.Warren,1888)** (Geometridae) Synonym(s): *subrubescens* W.Warren,1888; *despicienda* Butler,1889 Original reference: *Cidaria subrubescens* W.Warren,1888,

Proc. zool. Soc. Lond. 1888: 329. Type ♂: [Pakistan]: Berham Gully, September 24 1886. Range (in codes): **PK Swa Mre Pj IN Sml Kgr Drm Hp**

**73. Eupithecia subtilis Dietze, 1910** (Geometridae) Synonym(s): *subtilis* Dietze, 1910; *tonu Viidalepp*, 1988 Range (in codes): **IR Elb Shh UZ TJ KK PK Sha**

**74. Eupithecia ultimaria Boisduval, 1840** (Geometridae) Synonym(s): *ultimaria* Boisduval, 1840; *tornifascia* Rothschild, 1913 Range (in codes): **MA DZ TN LY ES FR IT GB Cc AZ Nv LB Bei EG EG11 SA As TR IQ Kq Mos Bgd Amr PK Krc IR Ss Kz IL Pa Jf LB SY**

**75. Eupithecia venosata (Fabricius, 1787)** (Geometridae) Synonym(s): *venosata* Fabricius, 1787; *insignata* Hübner, 1789; *decussata* Donovan, 1799; *comparanda* Vojnits, 1981 Original reference: Phalaena venosata Fabricius, 1787, Mant. Ins. 2: 209, nr. 205. Type(s): Austria: [Wien]. Range (in codes): **PT ES FR Co Sa Si IT MT IE GB BE NL LU DE CH AT PL CZ SK HU RO YU AL BG GR TR Cc GG AZ DK NO SE FI EE LV LT RU MD UA BY PK Swa Klm Sha Ch**

**76. Eupithecia vivida Vojnits & Laever, 1978** (Geometridae) Synonym(s): *vivida* Vojnits & Laever, 1978; *producta* Vojnits, 1981 nec Bastel, 1911; *wolfi* Vojnits, 1985 Range (in codes): **CN Yu IN Hp Kma Ch Up PK**

**Garaeus Moore, [1868]** (Geometridae) Synonym(s): *Garaeus* Moore, [1868]; *Epifidonia* Butler, 1886; *Drepanopsis* W. Warren, 1896; *Agaraeus* Kuznetsov & Stekolnikov, 1982; *Hyperapeira* Inoue, 1982

**77. Garaeus albipunctatus Hampson, 1895** (Geometridae) Synonym(s): *albipunctatus* Hampson, 1895 Range (in codes): **IN Drm PK Mre**

**78. Garaeus signatus (Butler, 1886)** (Geometridae) Synonym(s): *signata* Butler, 1886 Original reference: *Epifidonia signata* Butler, 1886, Proc. zool. Soc. Lond. 1886: 392, pl. xxxv fig. 9. Syntypes: [Pakistan]: Murree. Range (in codes): **Ch PK Thu Mre Dir** (present record)  
Material examined: 2♂ Dir 1500m 26 07 1987 (**Fig. 9**).

**Geometra Linnaeus, 1758** (Geometridae) Synonym(s): *Geometra* Linnaeus, 1758 Original reference: *Geometra* Linnaeus, 1758, Syst. Nat. (Edn. 10) 1: 519. Type-species: *Phalaena papilionaria* Linnaeus, 1758, ibidem 1: 522, by subsequent designation by ICZN (Opinion 450).

**79. Geometra purissima Wiltshire, 1966** (Geometridae) Synonym(s): *purissima* Wiltshire, 1966 Original reference: *Geometra purissima* Wiltshire, 1966, Z. Wien. ent. Ges. 51 (1/2): 28, pl. 2 fig. 1. Holotype ♂: Afghanistan: Nuristan: 25km NW Barikot, 1800m. Range (in codes): **AF Nu Bkt PK Nwf Swa Sgl Mdy Cte** (present records)

It was reported by Koçak from Shangla (Swat) (1989).<sup>10</sup>

Material examined: 1♀ Hazara: Chatter plain (SE Batgram) 1670m 12 07 1987; 3♀ Swat: E. Madyan Dara valley 1400m 23 06 1987 (**Fig. 10**).

**Glossotrophia L.B. Prout, 1913** (Geometridae) Synonym(s): *Glossotrophia* L.B. Prout, 1913

**Glossotrophia (Bicalcarella) Hausmann, 1993** (Geometridae) Synonym(s): *Bicalcarella* Hausmann, 1993 Original reference: *Bicalcarella* Hausmann, 1993, Mitt. münch. ent. Ges. 83: 92. Type-species: *Glossotrophia terminata* Wiltshire, 1966, by original designation [proposed originally as a subgenus of *Glossotrophia* Prout, 1913].

**80. Glossotrophia (Bicalcarella) terminata Wiltshire, 1966** (Geometridae) Synonym(s): *terminata* Wiltshire, 1966 Original reference: *Glossotrophia terminata* Wiltshire, 1966, Z. Wien. ent. Ges.

<sup>10</sup> Koçak, A.Ö., 1989, *Geometra purissima* Wiltshire in North Pakistan (Lepidoptera, Geometridae). *Cent. ent. Stud., Priamus* 5 (3): 100-102, 2 figs. 1 map.

51 (9/11): 130, figs. Holotype ♀: Afghanistan: Nuristan, Barikot, 25km N. v. Barikot 1800m 12-17.vii.1963 leg. Kasy & Vartian (BMNH). Range (in codes): **AF IR PK Ch Gg**

**Glossotrophia (Bicalcarella) terminata machadoi Hausmann,1993** (Geometridae)  
Synonym(s): *machadoi* Hausmann,1993 Range (in codes): **PK Gg Ch**

**Glossotrophia (Libanonia) Hausmann,1993** (Geometridae) Synonym(s): *Libanonia* Hausmann,1993 Original reference: Libanonia Hausmann,1993, Mitt. münch. ent. Ges. 83: 86-87. Type-species: *Glossotrophia asellaria* ssp. *semitata* Prout,1913, by original designation [proposed originally as a subgenus of *Glossotrophia* Prout,1913].

**81. Glossotrophia (Libanonia) sacraria (A.Bang-Haas,1910)** (Geometridae) Synonym(s): *sacraria* A.Bang-Haas,1910 Range (in codes): **GR Rd LB Bei TR CY JO IL Pa IQ AF Srb Kab Bm PK TJ Pm IR Shr Fa Sse Com Kz KG Uk**

**Glossotrophia (Libanonia) sacraria ariana Ebert,1965** (Geometridae) Synonym(s): *ariana* Ebert,1965; *tangii* Ebert,1965; *ghirshmani* Wiltshire,1966 Range (in codes): **AF Srb Kab Bm PK TJ Pm**

**Glossotrophia (s.str.) L.B.Prout,1913** (Geometridae) Synonym(s): *Glossotrophia* L.B.Prout,1913

**82. Glossotrophia (s.str.) jacta (Swinhoe,1885)** (Geometridae) Synonym(s): *jacta* Swinhoe,1885 Range (in codes): **PK Krc Sd**

**Gnophos Treitschke,1825** (Geometridae) Synonym(s): *#Sciadion* Hübner,[1806]; *Gnophos Treitschke,1825*; *Scotopteryx* Hübner,[1825]; *Scotopteryx* Agassiz,1847; *Gnophus* Agassiz,1847; *#Sciadion* L.B.Prout,1904. Original reference: Gnophos Treitschke,1825, [in] Ochsenheimer, Schmett. Eur. 5 (2): 432. Type-species: *Geometra furvata* [Denis & Schiffermüller],1775, by subsequent designation by Duponchel,1829, [in] Godart & Duponchel, Hist. nat. Lépid. Papillons Fr. 7 (2): 110.

**Gnophos (Ctenognophos) L.B.Prout,1915** (Geometridae) Synonym(s): *Ctenognophos* L.B.Prout,1915

**83. Gnophos (Ctenognophos) obtectarius Walker,1866** (Geometridae) Synonym(s): *obtectaria* Walker,1866 Range (in codes): **Ch Snm PK Mre Thu Abb**

**84. Gnophos (Ctenognophos) perlita Butler,1886** (Geometridae) Synonym(s): *perlita* Butler,1886; *#paerlita* L.B.Prout,1915 Original reference: Gnophos ? *perlita* Butler,1886, Proc. zool. Soc. Lond. 1886: 389. Syntypes: [Pakistan]: Kala Pani, 24th September 1885. Range (in codes): **PK K-P Abb**

**85. Gnophos dispunctatus Walker,1868** (Geometridae) Synonym(s): *dispunctatus* Walker,1868 Range (in codes): **PK Thu Mre**

**Gnophosema L.B.Prout,1912** (Geometridae) Synonym(s): *Gnophosema* L.B.Prout,1912

**86. Gnophosema isometra (W.Warren,1888)** (Geometridae) Synonym(s): *isometra* W.Warren,1888 Original reference: Gnophos *isometra* W.Warren,1888, Proc. Zool. Soc. Lond. 1888: 321. Type ♂: [Pakistan]: Akhor April 22, 1886. Range (in codes): **PK AF Bm Srb OM IR Ss Chh**

**Gnophosema isometra isometra (W.Warren,1888)** (Geometridae) Synonym(s): *isometra* W.Warren,1888 Original reference: Gnophos *isometra* W.Warren,1888, Proc. Zool. Soc. Lond. 1888: 321. Type ♂: [Pakistan]: Akhor April 22, 1886. Range (in codes): **PK**

**Gonodontis Hübner,[1823]** (Geometridae) Synonym(s): *Gonodontini* Forbes,1948

**87. Gonodontis clelia (Cramer,[1780])** (Geometridae) Synonym(s): *clelia* Cramer,[1780]; *rajaca* Walker,1860; *hyperbolica* Swinhoe,1885. Range (in codes): **IN SI Khs Bba NI PK Krc LK CN ID Sum Ja MY Bor PG SB AU QAU FJ NC WS**



**Gonodontis clelia clelia (Cramer,[1780])** (Geometridae) Synonym(s): *clelia* Cramer,[1780]; *rajaca* Walker,1860; *hyperbolica* Swinhoe,1885. Range (in codes): **IN SI Khs Bba NI PK Krc LK CN ID Sum Ja MY Bor PG SB AU QAU FJ NC WS**

**Hemistola W.Warren,1893** (Geometridae) Synonym(s): *Hemistola* W.Warren,1893

**88.Hemistola detracta Walker,1861** (Geometridae) Synonym(s): *detracta* Walker,1861 Range (in codes): **PK Cp Mre IN Sml Kul Hp**

**89.Hemistola loxiaria (Guenée,[1858])** (Geometridae) Synonym(s): *loxiaria* Guenée,[1858] ; *dispartita* Walker,1861; *cymia* Hampson,1903 Range (in codes): **PK Mre IN Sml**

**Heterolocha Lederer,1853** (Geometridae) Synonym(s): *Heterolocha* Lederer,1853; *Nabla* Walker,1866; *Hetaera* Gumpfenberg,1887; *Symmetresia* Wehrli,1937

**90.Heterolocha phoenicotaeniata (Kollar,[1844])** (Geometridae) Synonym(s): *phoenicotaeniata* Kollar,[1844] Original reference: *Aspilates phoenico-taeniata* Kollar,[1844], [in] Hügel, Kaschmir und das Reich der Siek 4 (2): 487. Type: Kaschmir. Range (in codes): **Ch PK Mre K-P Thu Nar** (present record)  
Material examined: 1♂ Hazara: Naran village 2450m 09 07 1987.

**Heterothera Inoue,1943** (Geometridae) Synonym(s): *Heterothera* Inoue,1943; *Viidaleppia* Inoue,1982

**91.Heterothera consimilis (W.Warren,1888)** (Geometridae) Synonym(s): *consimilis* W.Warren,1888 Original reference: *Thera consimilis* W.Warren,1888, Proc. zool. Soc. Lond. 1888: 326. Syntypes 5♂ 1♀: [Pakistan]: Thundiani and Nandar. Range (in codes): **IN Pj PK Thu Alp Swa Sgl Mdy Yek** (present records)  
Material examined: 1♂ Swat: Alpurai 1500m 24 07 1987; 1♀ Swat: E. Madyan Dara valley 1400m 23 06 1987; 10♂♀ Swat: Shangla Forest 2100m 27 06 1987 (**Fig.11**); 1♀ Swat: Yekhtangi Forest 2100m 24 06 1987.

**92.Heterothera dentifasciata (Hampson,1895)** (Geometridae) Synonym(s): *dentifasciata* Hampson,1895 Range (in codes): **PK Mre IN Hp Dlh**

**93.Heterothera undulata (W.Warren,1888)** (Geometridae) Synonym(s): *undulata* W.Warren,1888 Original reference: *Ypsiletes undulata* W.Warren,1888, Proc. zool. Soc. Lond. 1888: 326. Syntypes 3♂ 1♀: [Pakistan]: Thundiani. Range (in codes): **PK Pj Thu**

**Hirasa Moore,1888** (Geometridae) Synonym(s): *Hirasa* Moore,1888; *Hirasodes* W.Warren,1899; *Hirasichlora* Wehrli,1951

**94.Hirasa vitreata (Moore,1868)** (Geometridae) Synonym(s): *vitreata* Moore,1868 Original reference: *Scotosia vitreata* Moore,1868, Proc. zool. Soc. Lond. 1867: 656. Range (in codes): **PK K-P**

**Horisme Hübner,[1825]** (Geometridae) Synonym(s): *Horisme* Hübner,[1825]; *Larentia Bruand*,1847 (*praeocc.*) Original reference: *Horisme* Hübner,[1825], Verz. bekannter Schmett.: 331. Type-species: *Geometra tersata* [Denis & Schiffermüller],1775, Ankündigung syst. Werkes Schmett. Wienergegend: 109, by subsequent designation by Hulst,1896, Trans. Am. ent. Soc. 23: 272.

**95.Horisme nigrovittata (W.Warren,1888)** (Geometridae) Synonym(s): *nigrovittata* W.Warren,1888; *nigripunctata* W.Warren,1888 Original reference: *Phibalapteryx nigrovittata*

W.Warren,1888, Proc. zool. Soc. Lond. 1888: 327-328. Syntypes 2♀: [Pakistan]: Thundiani, August 17 1886. Range (in codes): **PK Thu**

**Hyperythra Guenée,[1858]** (Geometridae) Synonym(s): *Hyperythra Guenée,[1858]*; *Tycoonina W.Warren,1894*; *Pseuderythra Swinhoe,1904*; *Callipona Turner,1904*

**96. Hyperythra flavaria (Fabricius,1787)** (Geometridae) Synonym(s): *lutea Stoll,1781 nec Hufn.,1766*; *flavaria Fabricius,1787*; *flavata Fabricius,1794*; *limbolaria Guenée,[1858]*; *ennomaria Guenée,[1858]*; *luteata Guenée,[1858]*; *penicillaria Guenée,[1858]*; *lutearia Herrich-Schäffer,1856*; *rufifimbria W.Warren,1896*  
Original reference: *Phalaena flavaria Fabricius,1787, Ins. Mant. 2: 187. Syntypes: India orientali.* Range (in codes): **ID Ja PK Kba Cp IN Meg Ass LK Khs MY Bor Sbh KBa TH Ntt Hba**

**97. Hyperythra swinhoei Butler,1880** (Geometridae) Synonym(s): *swinhoei Butler,1880*; *phantasma Butler,1881*; *muselmana Brandt,1938* Original reference: *Hyperythra swinhoei Butler,1880, Ann. Mag. nat. Hist. (5) 5: 223. Holotype ♂: [Pakistan]: Kurrachee [Karachi] (BMNH).* Range (in codes): **IR Fa Mia PK Krc Sd Cp IN Mhw**

**Idaea Treitschke,1825** (Geometridae) Synonym(s): *Idaea Treitschke,1825*; *Sterrha Hübner,[1825]*; *Arrhostia Hübner,[1825]*; *Pyctis Hübner,[1825]*; *Ptychopoda Curtis,1826*; *Hyria Stephens,1829 nec Lam.,1819*; *Ania Stephens,1831*; *Goniacidalia Packard,1873*; *Pythodora Meyrick,1886*; *Janarda Moore,1888*; *Xenocentris Meyrick,1889*; *Mnesterodes Meyrick,1889*; *Aphrogeneia Gumpfenberg,1890*; *Argia Gumpfenberg,1890*; *Gnidia Gumpfenberg,1890*; *Pelagia Gumpfenberg,1890 nec Peron,1810*; *Andragrupos Hampson,1891*; *Carphoxera Riley,1891*; *Zeuctoneura W.Warren,1895*; *Synomila Hulst,1896*; *Ptenopoda Hulst,1896*; *Polygraphodes W.Warren,1897*; *Leptacme W.Warren,1897*; *Brachyprota W.Warren,1897*; *Hemipogon W.Warren,1897*; *Cacorista W.Warren,1899*; *Anteosis W.Warren,1900*; *Hyriogona W.Warren,1900*; *Neochrysa W.Warren,1900*; *Pogonogyia W.Warren,1900*; *Prospasta W.Warren,1900*; *Cysteophora Hulst,1900*; *Thysanotricha W.Warren,1903*; *Deinopyga W.Warren,1904*; *Schematorhages W.Warren,1905*; *Lobura W.Warren,1906*; *Omopera W.Warren,1906*; *Argyroscelia W.Warren,1907*; *Pareupithex W.Warren,1907*; etc.

**98. Idaea mutanda W.Warren,1888** (Geometridae) Synonym(s): *inductata Walker,1861 nec Gn.,[1858]*; *mutanda W.Warren,1888* Original reference: *Idaea mutanda W.Warren,1888, Proc. zool. Soc. Lond. 1888: 322 (nomen novum pro Acidalia inductata Walker,1861 nec Acidalia inductata Guenée,[1858] from N.America).* Range (in codes): **PK Cp LK**

**Isturgia Hübner,[1823]** (Geometridae) Synonym(s): *Isturgia Hübner,[1823]*; *Histurgia Agassiz,1847*; *Enconista Lederer,1853*; *Bichroma Gumpfenberg,1887*

**99. Isturgia disputaria (Guenée,[1858])** (Geometridae) Synonym(s): *disputaria Guenée,[1858]*; *indodata Walker,1863*; *strenuata Walker,1863*; *curvifera Walker,1870*; *gazella Blackmore,1872*; *martiniaria Oberthür,1876*; *granitalis Butler,1883*; *lithina Butler,1883*; *zebrina Butler,1883*; *infrictaria Swinhoe,1886*; *subocellata Warren,1896*; *trilineata Krüger,1939* Range (in codes): **DZ MA TN EG EG11 ET NG CM KE IN Pj Mp Poo Mhw PK Sd Krc YE Ad LY**

**100. Isturgia perviaria (Lederer,1855)** (Geometridae) Synonym(s): *perviaria Lederer,1855*; *albofascia Swinhoe,1885* Range (in codes): **IL Pa Hf SA SA63 BH LB Bei PK Sd Krc IQ Agh ID Sba**

**Isturgia perviaria perviaria (Lederer,1855)** (Geometridae) Synonym(s): *perviaria Lederer,1855*; *albofascia Swinhoe,1885* Range (in codes): **IL Pa Hf SA SA63 BH LB Bei PK Sd Krc IQ Agh**

**Lampropteryx Stephens,1831** (Geometridae) Synonym(s): *Lampropteryx Stephens,1831*; *Paralophia W.Warren,1893*; *Anisobole W.Warren,1902*; *Paracomucha W.Warren,1904*

**101. Lampropteryx jameza (Butler,1898)** (Geometridae) Synonym(s): *jameza Butler,1898*; *askoldaria Oberthür,1880* Range (in codes): **RU Us Ask JP PK Mre**

**Ligdia Guenée,[1858]** (Geometridae) Synonym(s): *Ligdia Guenée,[1858]*; *Harpicostia Wehrli,1936*

**102. Ligdia coctata Guenée,[1858]** (Geometridae) **Synonym(s):** *coctata* Guenée,[1858]; *efferata* Walker,1862; *restitutata* Walker,1862; *inspersata* Staudinger,1879; *restituta* Butler,1886 Range (in codes): **TR IN PK K-P Mre Cp Pj Swa Sgl Kkar** (present records)  
Material examined: 1♀ Swat: Karakar Pass 1400m 2 07 1987; 3♂♀ Swat: Shangla Forest 2100m 27 06 1987.

**Menophra Moore,1887** (Geometridae) **Synonym(s):** *Hemerophila* Stephens,1829 nec Hbn.,[1817]; *Menophra* Moore,1887; *Leptodontopera* W.Warren,1894; *Ephemerophila* W.Warren,1894; *Ceruncina* Wehrli,1941; *Malacuncina* Wehrli,1941

**103. Menophra plantei Inoue,1993** (Geometridae) **Synonym(s):** *plantei* Inoue,1993 Original reference: *Menophra plantei* Inoue,1993, Jap. J. Ent. 61 (4): 832-834, fig. Holotype ♂: Pakistan: Punjab: Mrree Hills, Nathia Gali, 2350m (BMNH). Range (in codes): **PK Pj Mre**

**104. Menophra subplagiata (Walker,1860)** (Geometridae) **Synonym(s):** *subplagiata* Walker,1860; *petrificaria* Kollar,[1844]; *ningwuana* Wehrli,1941 Range (in codes): **PK Mre Thu IN CN Sz**

**Microloxia W.Warren,1893** (Geometridae) **Synonym(s):** *Microloxia* W.Warren,1893 Original reference: *Microloxia* W.Warren,1893, Proc. zool. Soc. London 1893: 354.

**105. Microloxia indecretata (Walker,[1863])** (Geometridae) **Synonym(s):** *indecretata* Walker,[1863]; *pruinosa* Butler,1880; *aperta* Swinhoe,1886. Range (in codes): **IN Bba PK Krc AF Pag**

**Myrioblephara W.Warren,1893** (Geometridae) **Synonym(s):** *Myrioblephara* W.Warren,1893; *Prorhina* W.Warren,1893

**106. Myrioblephara repleta (L.B.Prout,1926)** (Geometridae) **Synonym(s):** *repleta* L.B.Prout,1926 Range (in codes): **PK Mre**

**Nadagara Walker,1861** (Geometridae) **Synonym(s):** *Nadagara* Walker,1861

**107. Nadagara grisea Butler,1883** (Geometridae) **Synonym(s):** *grisea* Butler,1883 Original reference: *Nadagara grisea* Butler,1883, Proc. zool. Soc. Lond. 1883: 172. Range (in codes): **PK Mre**

**Nebula Bruand,[1846]** (Geometridae) **Synonym(s):** *Nebula* Bruand,[1846]; *Coenotephria* L.B.Prout,1914.

**108. Nebula brevifasciata (W.Warren,1888)** (Geometridae) **Synonym(s):** *brevifasciata* W.Warren,1888 Original reference: *Cidaria brevifasciata* W.Warren,1888, Proc. zool. Soc. Lond. 1888: 330. Type ♂: [Pakistan]: Thundiani, August 19 1886. Range (in codes): **PK Thu**

**109. Nebula flavistrigata (W.Warren,1888)** (Geometridae) **Synonym(s):** *flavistrigata* W.Warren,1888 Original reference: *Melanippe flavistrigata* W.Warren,1888, Proc. zool. Soc. Lond. 1888: 329. Type ♂: [Pakistan]: Kala Pani, September 1 1886. Range (in codes): **PK K-P Pj**

**Nychiodes Lederer,1853** (Geometridae) **Synonym(s):** *Nychiodes* Lederer,1853

**Nychiodes (Eunychiodes) Wehrli,1941** (Geometridae) **Synonym(s):** *Eunychiodes* Wehrli,1941

**110. Nychiodes (Eunychiodes) antiquaria Staudinger,1892** (Geometridae) **Synonym(s):** *antiquaria* Staudinger,1892. Original reference: *Nychiodes lividaria* var. *antiquaria* Staudinger,1892, Dt.



ent. Z., Iris 5: 171-172. Syntypes: [Uzbekistan]: Margelan, Namangan, Samarkand. Range (in codes): **UZ Fe Ch PK Nwf Ci KK Ik CN Ui**

**Nychiodes (Eunychiodes) antiquaria confusa (W.Warren,1902)** (Geometridae)

Synonym(s): *confusa* W.Warren,1902 Original reference: *Phthonandria confusa* W.Warren,1902, Novit. zool. 9: 367. Type ♀: [Pakistan]: Chitral. Range (in codes): **PK Nwf Ci**

**111. Nychiodes quettensis Wiltshire,1966** (Geometridae) Synonym(s): *quettensis* Wiltshire,1966 Range (in codes): **PK Qu Bl**

**Odontopera Stephens,1831** (Geometridae) Synonym(s): *Odontopera Stephens,1831*; *Corotia Moore,1868*; *Nipponissa Butler,1878*; *Caripetodes W.Warren,1895*; *Cenoctenucha W.Warren,1897*; *Aethiopodes W.Warren,1902*; *Lioptilesia Wehrli,1936*; *Paragonodontis Wehrli,1936*

**112. Odontopera arida (Butler,1878)** (Geometridae) Synonym(s): *arida* Butler,1878 Original reference: *Nipponissa arida* Butler,1878, Ann. Mag. nat. Hist. 1878: 394. Type: Japan, Yokohama (BMNH). Range (in codes): **JP PK Thu**

**Odontopera arida arida (Butler,1878)** (Geometridae) Synonym(s): *arida* Butler,1878 Original reference: *Nipponissa arida* Butler,1878, Ann. Mag. nat. Hist. 1878: 394. Type: Japan, Yokohama (BMNH). Range (in codes): **JP PK Thu**

**113. Odontopera blaisa (Wehrli,1936)** (Geometridae) Synonym(s): *blaisa* Wehrli,1936 Original reference: *Gonodontis blaisa* Wehrli,1936, Ent. Rdsch. 54 (11): 128. Holotype ♂: [Pakistan]: Punjab, Rawalpindi (BMNH). Range (in codes): **PK Rw Pj**

**114. Odontopera kametaria (R.Felder & Rogenhofer,[1875])** (Geometridae) Synonym(s): *kametaria* R.Felder & Rogenhofer,[1875] Range (in codes): **IN PK Mre Swa Sgl Yek Dara Alp** (present records)

Material examined: 4♂♂ Swat: Alpurai 1500m 24 07 1987; 1♂ Swat: E. Madyan Dara valley 1400m 23 06 1987; 1♀ Swat: Shangla Forest 2170m 26 06 1987 *Moths were captured at the light trap*; 9♂♂ Swat: Shangla Forest 2100m 27 06 1987 (**Fig.12**); 6♂♂ Swat: Yekhtangi Forest 2100m 24 06 1987.

**115. Odontopera obliquaria (Moore,1868)** (Geometridae) Synonym(s): *obliquaria* Moore,1868 Range (in codes): **PK Thu IN Ben**

**116. Odontopera urania (Wehrli,1933)** (Geometridae) Synonym(s): *urania* Wehrli,1933 Range (in codes): **PK Ch**

**Opisthograptis Hübner,[1823]** (Geometridae) Synonym(s): *Opisthograptis Hübner,[1823]*; *Rumia Duponchel,1829*.

**117. Opisthograptis mimulina (Butler,1886)** (Geometridae) Synonym(s): *mimulina* Butler,1886 Original reference: *Rumia mimulina* Butler,1886, Proc. zool. Soc. Lond. 1886: 388. Syntypes: [Pakistan]: Murree. Range (in codes): **PK Thu Mre**

**118. Opisthograptis luteolata (Linnaeus,1758)\***

Material examined: 1♂ Swat: Shangla Forest 2170m 26 06 1987 *Heliophil specimens were captured in the glades.*

**Orothalassodes Holloway,1996** (Geometridae) Synonym(s): *Orothalassodes Holloway,1996*

**119. Orothalassodes pervulgata Inoue,2005** (Geometridae) Synonym(s): *pervulgata* Inoue,2005 Range (in codes): **CN Hn Sz Yu Ti IN NP PK TH VN PH Luz**

**Orthonama Hübner,[1825]\*****120. Orthonama obstipata (Fabricius,1794)\***

Material examined: 1♂ 2♀ Swat: E. Madyan Dara valley 1400m 23 06 1987; 1♂ 1♀ Swat: Shangla Forest 2100m 27 06 1987; 1♀ Swat: Yekhtangi Forest 1800-1900m 25 06 1987.

**Ourapteryx Leach,1814** (Geometridae) Synonym(s): *Ourapteryx Leach,1814*; *Uraptera Billberg,1820*; *Acaena Treitschke,1825*; *Uropteryx Agassiz,1847*; *Euctenurapteryx W.Warren,1894*; *Energopteryx Thierry-Mieg,1903*; *Phrudura Swinhoe,1906*.

**121. Ourapteryx pluristrigata (W.Warren,1888)** (Geometridae) Synonym(s): *pluristrigata W.Warren,1888*; *thibetaria Bastelberger,1911*. Original reference: *Urapteryx pluristrigata W.Warren,1888*, Proc. zool. Soc. Lond. 1888: 318. Syntypes 3♂: [Pakistan]: Thundiani, August 1886. Range (in codes): **PK Thu CN Ti**

**122. Ourapteryx yerburii (Butler,1886)** (Geometridae) Synonym(s): *yerburii Butler,1886*; *sinata Wehrli,1940*. Original reference: *Urapteryx yerburii Butler,1886*, Proc. zool. Soc. Lond. 1886: 388. Type: [Pakistan]: Murree 2nd October,1885. Range (in codes): **PK Mre CN Sz TW**

**123. Ourapteryx ebuleata Guenée,[1858]\***

Material examined: 1♂ Hazara: Naran village 2450m 09 07 1987; 2♂ Hazara: Naran village 2450m 10 07 1987.

**Paraplaneta W.Warren,1895****124. Paraplaneta obliquilineata (Hampson,1895)\***

Material examined: 1♂ 2♀ Swat: Shangla Forest 2100m 27 06 1987 (**Fig.13**).

**125. Paraplaneta conturbata (Walker,[1863])** (Geometridae) Synonym(s): *conturbata Walker,[1863]* Original reference: *Larentia conturbata Walker,[1863]*, List spec. lepid. Ins. Colln. Br. Mus. 26: 1703. Type ♂: N. Hindostan (BMNH). Range (in codes): **IN PK Thu CN Pkn**

**126. Paraplaneta hreblayi Choi & Stüning,2011** (Geometridae) Synonym(s): *hreblayi Choi & Stüning,2011* Range (in codes): **PK**

**Peetula Moore,1888** (Geometridae) Synonym(s): *Peetula Moore,1888*

**127. Peetula stramineata (W.Warren,1888)** (Geometridae) Synonym(s): *stramineata W.Warren,1888* Original reference: *Angerona stramineata W.Warren,1888*, Proc. zool. Soc. Lond. 1888: 319. Syntypes 4♂: [Pakistan]: Thundiani, September 1886. Range (in codes): **PK Thu Mre**

**Peratophyga W.Warren,1894\*****128. Peratophyga hyalinata (Kollar,[1844])\***

Material examined: 1♂ 1♀ Hazara: Chatter Hills 1700m 12 07 1987; 4♂ Swat: Shangla Forest 2100m 27 06 1987 (**Fig.14**).

This species was also described by Wiltshire in 1966 from Barikot (Afghanistan) as “*Zamarada ionephela*”, but it is currently considered as junior synonym of *P. hyalinata* Kollar. The species is recorded in Pakistan for the first time.

**Perizoma Hübner,[1825]** (Geometridae) Synonym(s): *Perizoma Hübner,[1825]*; *Mesotype Hübner,[1825]*; *Emmelesia Stephens,1829*; *Zerynthia Curtis,1830 (praeocc.)*; *Gagitodes W.Warren,1893* Original reference: *Perizoma Hübner,[1825]*, Verz. bekannter Schmett.: 327. Type-species: *Geometra albulata* [Denis & Schiffermüller],1775, Ankündigung syst. Werkes Schmett. Wienergegend: 109, by subsequent designation by Warren,1893, Proc. zool. Soc. Lond. 1893: 377.

**129. Perizoma antisticta (L.B.Prout,1938)** (Geometridae) Synonym(s): *antisticta L.B.Prout,1938* Range (in codes): **PK Pj NP Ch**

**130. Perizoma seriata (Moore,1888)\***

Material examined: 1♀ Swat: Shangla Forest 2100m 27 06 1987 (**Fig.15**).

This species was described from Darjiling (Sikkim), also reported from Kabul (Afghanistan). In Pakistan, it is recorded here for the first time.

**Phaiogramma Gumpenberg,1887** (Geometridae) Synonym(s): *Phaiogramma Gumpenberg,1887*

**131. Phaiogramma discessa (Walker,1861)** (Geometridae) Synonym(s): *discessa Walker,1861*; *lataria Walker,[1863]*; *frequens Butler,1881* Range (in codes): **IN PK Krc Sd**

**Photoscotosia W.Warren,1888** (Geometridae) Synonym(s): *Trichopleura Staudinger,1882 nec Kaupp,1858*; *Photoscotosia W.Warren,1888*; *Lasiogma Meyrick,1892*. Original reference: *Photoscotosia W.Warren,1888*, Proc. zool. Soc. Lond. 1888: 328.

**132. Photoscotosia amplicata (Walker,1862)** (Geometridae) Synonym(s): *amplicata Walker,1862*; *tresignata Moore,1868*; *dejeani Oberthür,1893* Range (in codes): **PK Thu IN SI Djl Ben CN Sz T-T**

**133. Photoscotosia miniosata (Walker,1862)** (Geometridae) Synonym(s): *miniosata Walker,1862* Range (in codes): **PK Thu Swa Sgl** (present record) **BT BD Syl BT IN PH Luz**  
Material examined: 1♂ Swat: Shangla Forest 2100m 27 06 1987.

**Pingasa Moore,[1887]** (Geometridae) Synonym(s): *Pingasa Moore,[1887]*; *Skorpisthes Lucas,1900*.

**134. Pingasa multispurcata L.B.Prout,1913** (Geometridae) Synonym(s): *multispurcata L.B.Prout,1913* Original reference: *Pingasa multispurcata L.B.Prout,1913*, Novit. zool. 20: 397. Type ♀: [Pakistan]: Rawal Pindi; Campbellpur (BMNH). Range (in codes): **PK Pj Rw Cp Kkar** (present record) **IQ Agh**

Material examined: 1♂ Swat: Karakar Pass 1400m 2 07 1987 (**Fig.16**).

**Praegnophosema Ebert,1968** (Geometridae) Synonym(s): *Praegnophosema Ebert,1968*

**135. Praegnophosema dryepes (L.B.Prout,1938)** (Geometridae) Synonym(s): *dryepes L.B.Prout,1938* Range (in codes): **Ch PK Pj**

**Problepsis Lederer,1853** (Geometridae) Synonym(s): *Caloptera Frivaldszky,1845 nec Gistel,1834*; *Problepsis Lederer,1853*; *Argyris Guenée,[1858]*; *Problepsiodes W.Warren,1899*

**136. Problepsis ocellata (Frivaldszky,1845)** (Geometridae) Synonym(s): *ocellata Frivaldszky,1845*; *ommatophoraria Guenée,[1858]* Original reference: *Caloptera ocellata Frivaldszky,1845*, Evr. Kiral. Magy. Term. Tars. 1: 185, pl.3 fig.1. Syntypes: Greece: Crete, [Turkey]: Smyrna [İzmir]. Range (in codes): **TR GR Cr CY LB Bei IL Pa Js Tbs PK Cp Pj Swa Kkar Mdy** (present records)



**Problepsis ocellata cinerea (Butler,1886)** (Geometridae) Synonym(s): *cinerea* Butler,1886  
Original reference: *Argyria cinerea* Butler,1886, Proc. zool. Soc. London 1886 (3): 387-388, pl.35 fig. 8.  
 Syntypes: [Pakistan]: Campbellpore, 40 miles from Rawal Pindee (BMNH). Range (in codes): **PK Cp Pj Swa Kkar Mdy** (present records)

Material examined: 4♀ Swat: Karakar Pass 1400m 2 07 1987; 1♀ Swat: Madyan 1400m 22 06 1987; 1♀ Swat: N.Madyan 1500m 22 06 1987 (**Fig.17**).

**Pseudosterrha W.Warren,1888** (Geometridae) Synonym(s): *Pseudosterrha* W.Warren,1888  
Original reference: *Pseudosterrha* W.Warren,1888, Proc. zool. Soc. Lond. 1888: 324. Type-species: *Pseudosterrha ochrea* W.Warren,1888, by monotypy.

**137. Pseudosterrha paulula (Swinhoe,1886)** (Geometridae) Synonym(s): *paulula* Swinhoe,1886; *ochrea* W.Warren,1888; *gayneri* Rothschild,1901 Range (in codes): **EG SD SA IR PK Pj Cp IN**

**Psyra Walker,1860** (Geometridae) Synonym(s): *Psyra* Walker,1860; *Orbasia* Swinhoe,1894; *Oncodocnemis* Rebel,1901

**138. Psyra debilis W.Warren,1888** (Geometridae) Synonym(s): *debilis* W.Warren,1888  
Original reference: *Psyra debilis* W.Warren,1888, Proc. zool. Soc. Lond. 1888: 319. Syntypes 3♂: [Pakistan]: Thundiani. Range (in codes): **PK Thu Haz Nar IN Hp Kgr Drm**

**Psyra debilis debilis W.Warren,1888** (Geometridae) Synonym(s): *debilis* W.Warren,1888  
Original reference: *Psyra debilis* W.Warren,1888, Proc. zool. Soc. Lond. 1888: 319. Syntypes 3♂: [Pakistan]: Thundiani. Range (in codes): **PK Thu Haz Nar**

Material examined: 1♀ Hazara: Naran village 2450m 09 07 1987.

**Rheumaptera Hübner,1822** (Geometridae) Synonym(s): *Rheumaptera* Hübner,1822; *Eulype* Hübner,[1825]; *Calocalpe* Hübner,[1825]; *Melanippe* Duponchel,1829; *Rheumatoptera* Gumpfenberg,1887; *Xenospora* W.Warren,1903

**139. Rheumaptera nigralbata (W.Warren,1888)** (Geometridae) Synonym(s): *nigralbata* W.Warren,1888 Original reference: *Scotosia nigralbata* W.Warren,1888, Proc. zool. Soc. Lond. 1888: 327. Syntypes: 3♂ 2♀: [Pakistan]: Thundiani, August 1886. Range (in codes): **PK Pj Thu SI**

**Rhodometra Meyrick,1892** (Geometridae) Synonym(s): *Rhodometra* Meyrick,1892; *Sterrhanthia* Butler,1894

**140. Rhodometra sacraria (Linnaeus,1767)** (Geometridae) Synonym(s): *sacraria* Linnaeus,1767; *labda* Cramer,1777; *sacralis* Thunberg,1784; *fulvaria* Fabricius,1794; *sanguinaria* Esper,1801; *minervae* Gistl,1856; *labdaria* Guenée,[1858]; Original reference: *Phalaena sacraria* Linnaeus,1767, Syst. Nat. (Edn.12) 1(2): 863. Syntypes: [Algeria]: Barbaria (LSL). Range (in codes): **MA DZ TN PT ES Mu FR Co Sa Si IT MT IE GB BE NL LU DE CH AT CZ SK HU RO YU AL BG GR Cr Rd TR IL Pa Car Jf Js Hf LB Bsa CY IQ Agh TH IR Shr Fa Sse Ahz DK NO SE EE LV RU MD UA BY AF Ca PK Bl Cp Qu ZA ZA04 ZA05 ZA06 ZA27 Kzu Nta Lpo Tva Spb Mdk SH MG MN CN Mre Cp Haz Cls Cn Md Az IN AZ Nv AM IR Cm**

Material examined: 1♂ 1♀ Gilgit Agency: Chilas 1280m 13 07 1987; 2♂ Hazara: Pattan S 0940m 24 07 1987.

**Rhodostrophia Hübner,[1823]** (Geometridae) Synonym(s): *Rhodostrophia* Hübner,[1823]; *Delocharis* Butler,1883; *Leptosidia* Hampson,1903; *Rhodostrophia* Brandt,1938. Original reference: *Rhodostrophia* Hübner,[1823], Verz. bekannter Schmett.: 300. Type-species: *Phalaena calabra* Petagna,1786, Spec. Insect. ulterioris Calabriae: 38, fig.23, by subsequent designation by Hampson,1895, Fauna Br. India (Moths) 3: 455.

- 141. Rhodostrophia cinerascens (Moore,1888)** (Geometridae) Synonym(s): *cinerascens* Moore,1888; *subflavida* W.Warren,1893 Range (in codes): **Ch PK Nwf Ci Nar** (present record) **AF IN Hp Kul**  
**Rhodostrophia cinerascens borealis (Swinhoe,1890)** (Geometridae) Synonym(s): *borealis* Swinhoe,1890; *rhoda* L.B.Prout,1913 Range (in codes): **PK Nwf Ci Nar** (present record) **AF IN Hp Kul**  
Material examined: 1♂ (Prep.No.1208). Pakistan Naran, Katha village 2700-2800m 11 7 1987 (**Fig.18**).
- 142. Rhodostrophia glaucofusa (Hampson,1907)** (Geometridae) Synonym(s): *glaucofusa* Hampson,1907 Range (in codes): **PK Bl Qu**
- 143. Rhodostrophia herbicolens (Butler,1883)** (Geometridae) Synonym(s): *herbicolens* Butler,1883 Original reference: Delocharis herbicolens Butler,1883, Proc. zool. Soc. Lond. 1883: 173.  
Range (in codes): **PK Mre IN**
- 144. Rhodostrophia inconspicua (Butler,1886)** (Geometridae) Synonym(s): *inconspicua* Butler,1886 Original reference: Phyletis inconspicua Butler,1886, Proc. zool. Soc. Lond. 1886: 391.  
Type ♂: [Pakistan]: Murree, 30th August 1885. Range (in codes): **AF Ch Gs PK Nwf Ci Mre Thu K-P Pj**  
**Rhodostrophia inconspicua inconspicua (Butler,1886)** (Geometridae) Synonym(s): *inconspicua* Butler,1886 Original reference: Phyletis inconspicua Butler,1886, Proc. zool. Soc. Lond. 1886: 391.  
Type ♂: [Pakistan]: Murree, 30th August 1885. Range (in codes): **PK Mre Pj**  
**Rhodostrophia inconspicua subconspicua L.B.Prout,1913** (Geometridae) Synonym(s): *subconspicua* L.B.Prout,1913 Range (in codes): **AF Ch Gs PK Nwf Ci**
- 145. Rhodostrophia meonaria (Guenée,[1858])** (Geometridae) Synonym(s): *meonaria* Guenée,[1858] Range (in codes): **AF Kab Bm PK IN**  
**Rhodostrophia meonaria meonaria (Guenée,[1858])** (Geometridae) Synonym(s): *meonaria* Guenée,[1858] Range (in codes): **PK IN**
- 146. Rhodostrophia pelliaria (Guenée,[1858])** (Geometridae) Synonym(s): *pelloniaria* Guenée,[1858]; *meonodes* L.B.Prout,1935 Range (in codes): **PK Mre Thu IN Hp Kul Ass Meg Khs**  
**Rhodostrophia pelliaria pelliaria (Guenée,[1858])** (Geometridae) Synonym(s): *pelloniaria* Guenée,[1858]; *meonodes* L.B.Prout,1935 Range (in codes): **PK Mre Thu IN Hp Kul**
- 147. Rhodostrophia rhodospania L.B.Prout,1935** (Geometridae) Synonym(s): *rhodospania* L.B.Prout,1935 Range (in codes): **PK Bl Mtz**
- 148. Rhodostrophia vinacearia (Moore,1868)** (Geometridae) Synonym(s): *vinacearia* Moore,1868 Range (in codes): **PK Mre IN Ben Drm SI**
- Scopula Schrank,1802** (Geometridae) Synonym(s): *Scopula Schrank,1802*
- 149. Scopula kashmirensis (Moore,1888)** (Geometridae) Synonym(s): *kashmirensis* Moore,1888; *gooraisensis* L.B.Prout,1935; *quettensis* L.B.Prout,1935 Range (in codes): **Ch PK Bl Qu IN**
- 150. Scopula fluidaria (Swinhoe,1885)** (Geometridae) Synonym(s): *fluidaria* Swinhoe,1885 Range (in codes): **PK Krc IN Poo Bba**
- 151. Scopula luridata (Zeller,1847)** (Geometridae) Synonym(s): *luridata* Zeller,1847; *formosaria* Herrich-Schäffer,1852; *coenosaria* Lederer,1855 Original reference: *Idaea luridata* Zeller,1847, Isis 1847: 20-21. Type: [Griechenland]: Rhodus. Range (in codes): **GR Cr Rd TR LB Cc GG AZ Nv PK Krc CY KP KR CN IL Pa Jf SA YE SO**  
**Scopula luridata distracta (Butler,1881)** (Geometridae) Synonym(s): *distracta* Butler,1881 Range (in codes): **PK Krc**
- 152. Scopula minorata (Boisduval,1833)** (Geometridae) Synonym(s): *minorata* Boisduval,1833; *#ochroleucata* Herrich-Schäffer,1844; *ochroleucaria* Herrich-Schäffer,[1847]; *luculata* Guenée,[1858]; *mauritiata* Guenée,[1858]; *consentanea* Walker,1861; *holobapharia* Mabille,1900; *mombasae*

*W. Warren, 1904; dresnayi D. Lucas, 1937.* Original reference: *Geometra minorata* Boisduval, 1833, *Nouv. Ann. Mus. Hist. nat. Paris* 2: 263. Syntypes: Mauritius. Range (in codes): **ET KE Mb MG RE MU MA PT Cn ES Mu FR Sa Si IT MT AL BG GR Cr TR IQ Mos Bgd Ktz ZA Ksi Kzu ZA16 Mpu ZA21 Tva Lpo IL Pa Js CY SA MG CV AF PK ID Sum**

- 153. *Scopula ornata* (Scopoli, 1763)** (Geometridae) Synonym(s): *ornata* Scopoli, 1763; *instilata* Hufnagel, 1767; *paludata* Linnaeus, 1767; *institata* Rottemburg, 1777; *interrupta* Goeze, 1781; *intersecta* Fourcroy, 1785. Original reference: *Phalaena ornata* Scopoli, 1763, *Entomologia Carniolica*: 219. Type(s): [Slovenien]: Carniolia [Krain]. Range (in codes): **MA DZ TN PT ES Mu FR Co Sa Si IT MT GB BE NL LU DE CH AT PL CZ SK HU RO YU AL BG GR Cr Rd CY TR Cc GG AZ AM Nv IQ DK SE FI EE LV LT RU MD UA BY CN Ui Kun AF Ca PK Bl Qu Mre**

- 154. *Scopula pallida* (W. Warren, 1888)** (Geometridae) Synonym(s): *pallida* W. Warren, 1888; *peralba* Swinhoe, 1893. Original reference: *Idaea pallida* W. Warren, 1888, *Proc. zool. Soc. Lond.* 1888: 322. Type ♂: [Pakistan]: Thundiani, August 1 1886. Range (in codes): **PK Pj Thu Mre MM Shn**

- 155. *Scopula pulchellata* (Fabricius, 1794)\***  
Material examined: 1♀ Swat: Karakar Pass 1400m 2 07 1987 (**Fig.19**).

- 156. *Scopula transcaspica* L.B. Prout, 1935** (Geometridae) Synonym(s): *transcaspica* L.B. Prout, 1935. Original reference: *Scopula submutata* ssp.? *transcaspica* L.B. Prout, 1935, [in] Seitz, Gross-Schmett. Erde 3 (suppl.): 40 (5a). Syntypes 2♀: [Turkmenistan]: Ashkhabad. Range (in codes): **Cc GG AM AZ Nv TR TM Kp Fyz Ger IR Fa Sse Com Kz Shr Lo AF PK**  
***Scopula transcaspica taftanica* (Brandt, 1941)** (Geometridae) Synonym(s): *taftanica* Brandt, 1941. Range (in codes): **IR Fa Sse Com Kz Shr AF PK**

***Scotopteryx* Hübner, [1825]** (Geometridae) Synonym(s): *Scotopteryx* Hübner, [1825]; *Onychia* Hübner, [1825]; *Eubolia* Duponchel, 1829; *Phasiane* Duponchel, 1829; *Eusebia* Bruand, 1846 *nec* Dup., [1845]; *Limnophila* Gumpfenberg, 1887; *Forbachia* Albrecht, 1920. Original reference: *Scotopteryx* Hübner, [1825], *Verz. bekannter Schmett.*: 338. Type-species: *Geometra tenebraria* Hübner, [1809], *Samml. eur. Schmett.* 5: pl. 64 fig. 330, by monotypy.

- 157. *Scotopteryx nasifera* (W. Warren, 1888)** (Geometridae) Synonym(s): *nasifera* W. Warren, 1888. Original reference: *Eubolia nasifera* W. Warren, 1888, *Proc. zool. Soc. Lond.* 1888: 331. Type ♂: [Pakistan]: Thundiani, August 19 1886. Range (in codes): **PK Thu Pj**

***Semiothisa* Hübner, [1818]** (Geometridae) Synonym(s): *Semiothisa* Hübner, [1818]

- 158. *Semiothisa streniataria* (Walker, 1861)** (Geometridae) Synonym(s): *streniataria* Walker, 1861; *fidoniata* Hampson, 1895; *olivescens* W. Warren, 1896. Range (in codes): **IN PK Cp Sd Krc LK**

***Sirinopteryx* Butler, 1883\***

- 159. *Sirinopteryx ablunata* (Guenée, [1858])\***  
Material examined: 9♂♂ Swat: Shangla Forest 2100m 27 06 1987 (**Fig.20**).

***Somatina* Guenée, [1858]** (Geometridae) Synonym(s): *Somatina* Guenée, [1858]; *Somatodes* Guenée, [1858]; *Nebessa* Walker, 1869; *Prasonesis* Meyrick, 1889; *Somatinopsis* W. Warren, 1896

- 160. *Somatina anthophilata* Guenée, [1858]** (Geometridae) Synonym(s): *anthophilata* Guenée, [1858]. Range (in codes): **PK Cp Abb TH CMa CDo IN Bba**

***Stamnones* Guenée, [1858]** (Geometridae) Synonym(s): *Stamnones* Guenée, [1858]; *Tora* Walker, 1867; *Marmopteryx* Packard, 1874; *Synneuria* Mabille, 1885; *Lissopsis* W. Warren, 1894; *Grammicopteryx* Thierry-Mieg, 1904



- 161. Stamnodes pauperaria (Eversmann,1848)** (Geometridae) **Synonym(s):** *pauperaria Eversmann,1848* Range (in codes): **RU At KG Tar Ssn KK Ik CN Ui Kml T-S UZ Fe TJ Pm IN PK Thu**  
**Stamnodes pauperaria pamphilata R.Felder & Rogenhofer,1875** (Geometridae)  
**Synonym(s):** *pamphilata R.Felder & Rogenhofer,1875* Range (in codes): **PK Thu IN**

**Stegania Guenée,1845\***

- 162. Stegania mesonephele (Wiltshire,1967)\***  
Material examined: 1♂ Gilgit Agency: Chilas 1280m 14 07 1987; 1♂ Swat: Kalam 2100m 19 06 1987 (Gen. Prep. no 1143).

**Symmacra W.Warren,1896**

- 163. Symmacra solidaria (Guenée,[1858])** (Geometridae) **Synonym(s):** *solidaria Guenée,[1858]* Range (in codes): **ET LK PK Krc IN Adm Poo Mhw WS PG Ls Wd CN ID Clb**

**Tephрина Guenée, [1845]** (Geometridae) **Synonym(s):** *Tephрина Guenée, [1845], #Tephrinia Okyar & Aytac,1999*

- 164. Tephрина ossea Swinhoe,1885** (Geometridae) **Synonym(s):** *ossea Swinhoe,1885* Original reference: *Tephрина ossea Swinhoe,1885, Trans. Ent. Soc. Lond. 1885: 353, pl.9 fig.9. Syntypes* ♂♂:[Pakistan]: Quetta (BMNH). Range (in codes): **PK Bl Qu**

**Thalassodes Guenée,[1858]** (Geometridae) **Synonym(s):** *Thalassodes Guenée,[1858]*

- 165. Thalassodes opalina Butler,1880** (Geometridae) **Synonym(s):** *opalina Butler,1880* Original reference: *Thalassodes opalina Butler,1880, Ann. Mag. nat. Hist. (5) 6: 214. Range (in codes):* **PK Mre IN Djl SI CN Hn Pj Yu**

**Thetidia Boisduval,1840** (Geometridae) **Synonym(s):** *Euchloris Hübner,[1823] nec Bill.,1820; Thetidia Boisduval,1840; Aglossochloris L.B.Prout,1912; Antonechloris Raineri,1994*

- 166. Thetidia radiata Walker,[1863]** (Geometridae) **Synonym(s):** *radiata Walker,[1863]* Original reference: *Thetidea ? radiata Walker,[1863], List Specimens lepid. Insects Colln Br. Mus. 26: 1567. Type ♂: [India]: North Hindostan (BMNH). Range (in codes):* **AF Kab Pag IN PK**

**Triphosa Stephens,1829** (Geometridae) **Synonym(s):** *Triphosa Stephens,1829; Umbrosina Bruand,1847; Speluncaris Bruand,1847; Strepsizuga W.Warren,1908* Original reference: *Triphosa Stephens,1829*

- 167. Triphosa aequivalens L.B.Prout,1937** (Geometridae) **Synonym(s):** *aequivalens L.B.Prout,1937* Range (in codes): **PK Pj**

- 168. Triphosa dubiosata (Walker,1862)** (Geometridae) **Synonym(s):** *dubiosata Walker,1862* Original reference: *Scotosia dubiosata Walker,1862, List Spec. lepid. Ins. Colln. Br. Mus. 25: 1352. Range (in codes):* **IN SI NI Pj AF PK Thu Mre**

- 169. Triphosa expansa (Moore,1888)** (Geometridae) **Synonym(s):** *expansa Moore,1888* Original reference: *Scotosia expansa Moore,1888, Descr. lepid. Colln. Atkinson 3: 274. Range (in codes):* **PK Thu IN SI Djl**

**170. Triphosa tremulata (Guenée,[1858])** (Geometridae) **Synonym(s):** *tremulata* Guenée,[1858] Range (in codes): **PK Abb IN SI CN**

**171. Triphosa venimaculata (Moore,1868)** (Geometridae) **Synonym(s):** *venimaculata* Moore,1868 Range (in codes): **IN Ben PK Thu SI Djl**

**Venusia Curtis,1839** (Geometridae) **Synonym(s):** *Venusia Curtis,1839; Discoloxia W.Warren,1895; Nomenia Pearsall,1905*

**172. Venusia albinea (L.B.Prout,1938)** (Geometridae) **Synonym(s):** *albinea L.B.Prout,1938* Range (in codes): **PK Pj Rw**

**173. Venusia pallidaria Hampson,1903** (Geometridae) **Synonym(s):** *pallidaria Hampson,1903* Range (in codes): **PK Pj Mre**

**174. Venusia kasyata Wiltshire,1966\***

Material examined: 3♂♀ Hazara: Naran village 2450m 10 07 1987 (*Gen. Prep. no 1276*); 1♀ Swat: Kalam 2000m 20 06 1987; 2♀ Swat: Shangla Forest 2100m 27 06 1987 (**Fig.21**).

**Xanthorhoe Hübner,[1825]** (Geometridae) **Synonym(s):** *Xanthorhoe Hübner,[1825]; Malenydris Hübner,[1825]; Ochyria Hübner,[1825]; Cidaria Stephens,1829; Coremia Guenée,[1845] nec Audinet-Serville,1834; Scotocoremia Butler,1882; Monochryia W.Warren,1901; Anisolasia W.Warren,1904* Original reference: Xanthorhoe Hübner,[1825], Verz. bekannter Schmett.: 327. Type-species: *Geometra montanata* [Denis & Schiffermüller],1775, Ankündigung syst. Werkes Schmett. Wienergegend: 113, by subsequent designation by Warren,1893, Proc. zool. Soc. Lond. 1893: 376.

**175. Xanthorhoe saturata Guenée,1857** (Geometridae) **Synonym(s):** *saturata Guenée,1857; exliturata Walker,1862; livida Butler,1878; inamoena Butler,1879; granitalis Butler,1889* Range (in codes): **PK Cp IN Hp Drm JP**

### **Xenortholitha Inoue,1944**

**176. Xenortholitha latifusata (Walker,1862)** (Geometridae) **Synonym(s):** *latifusata* Walker,1862 Range (in codes): **IN Dlh PK Mre Swa Sgl** (present record)

Material examined: 1♀ Swat: Shangla Forest 2100m 27 06 1987 (**Fig.22**).

**Zamarada Moore,1887** (Geometridae) **Synonym(s):** *Zamarada Moore,1887*

**177. Zamarada minimaria Swinhoe,1895** (Geometridae) **Synonym(s):** *minimaria Swinhoe,1895; iranica Brandt,1941* Range (in codes): **NE DZ SD Wme NSD SD08 PK Sd Krc IR Ss Chh SA SA39 SA50 Hj As YE**

**Zamarada minimaria minimaria Swinhoe,1895** (Geometridae) **Synonym(s):** *minimaria Swinhoe,1895; iranica Brandt,1941* Range (in codes): **PK Sd Krc IR Ss Chh SA YE As SA50**

**Zygophyxia L.B.Prout,1916** (Geometridae) **Synonym(s):** *Zygophyxia L.B.Prout,1916*

**178. Zygophyxia relictata (Walker,1866)** (Geometridae) **Synonym(s):** *relictata Walker,1866; demissus Swinhoe,1887; ooptera Turner,1922* Original reference: *Acidalia relictata* Walker,1866, List spec. lepid. Ins. Colln. Br. Mus. 35: 1629. Type ♂: India. Range (in codes): **IN Mhw NI PK Krc Cp AU QAu**



**Fig. 1** - *Anonychia rostrifera*. Pakistan Swat, Shangla 2100m, 27-28 06 1987 (Cesa)



**Fig. 2** - *Ascotis selenaria*. Pakistan Swat, Shangla 2100m, 27-28 6 1987 (Cesa).





**Fig. 3-** *Chiasmia aestimaria*. Pakistan Gilgit 1500m, 20 07 1987 (Cesa).



**Fig. 4 -** *Chiasmia pluviata* ssp. *fuscomarginata*. Pakistan Swat Karakar 1400m, 2 7 1987 (Cesa).



**Fig. 5** - *Coenina collenettei*. Pakistan Swat, Karakar 1400m, 2 7 1987 (Cesa).



**Fig. 6** - *Colostygia albigirata*. Pakistan Swat, Yekhtangi 2100m, 24 06 1987 (Cesa).





**Fig. 7** - *Euphyia ochreatea*. Pakistan Swat, Kalam 2000m, 20 6 1987 (Cesa).



**Fig. 8** - *Eupithecia interrubescens*. Pakistan Swat, Yekhtangi 2100m, 24 06 1987 (Cesa).





**Fig. 9** - *Garaeus signatus*. Pakistan Dir 1500m, 26 7 1987 (Cesa)



**Fig. 10-** *Geometra purissima*. Pakistan Swat, Madyan, Dara valley 1400m, 23 06 1987 (Cesa).



**Fig. 11** - *Heterothera consimilis*. Pakistan Swat, Shangla 2100m, 27-28 06 1987 (Cesa).



**Fig. 12** - *Odontoptera kametaria*. Pakistan Swat, Shangla 2100m, 27-28 06 1987 (Cesa).





**Fig. 13** - *Paraplaneta obliquilineata*. Pakistan Swat, Shangla 2100m, 27-28 06 1987 (Cesa).



**Fig. 14** - *Peratophyga hyalinata*. Pakistan Swat, Shangla 2100m, 27-28 06 1987 (Cesa).





**Fig. 15** - *Perizoma seriata*. Pakistan Swat, Shangla 2100m, 27-28 06 1987 (Cesa).



**Fig. 16** - *Pingasa multispurcata*. Pakistan Swat, Karakar 1400m, 30 6 1987 (Cesa).



**Fig. 17** - *Problepsis ocellata* ssp. *cinerea*. Pakistan Swat, N Madyan 1400m, 22 06 1987 (Cesa)



**Fig. 18** - *Rhodostrophia* aff. *cinerascens* (Prep.No.1208). Pakistan Naran, Katha village 2700-2800m 11 7 1987 (Cesa).





**Fig. 19** - *Scopula pulchellata*. Pakistan Swat, Karakar 1400m, 2 7 1987 (Cesa).



**Fig. 20** - *Sirinopteryx ablunata*. Pakistan Swat, Shangla 2100m, 27-28 06 1987 (Cesa).





**Fig. 21** - *Venusia kasyata*. Pakistan Swat, Shangla 2100m, 27-28 06 1987 (Cesa).



**Fig. 22** - *Xenortholitha latifusata*. Pakistan Swat, Shangla 2100m, 27-28 06 1987 (Cesa).

**Contents: Koçak, A.Ö. & M.Kemal,** Lepidoptera of Pakistan based upon the Info-system of the Cesa I-Geometridae, p.1 - Editorial, p.77.

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